the Skeptical Inquirer

Randi's Project Alpha: Magicians in the Psi Lab

American Disingenuous: Cult Archaeology
Responding to Pseudoscience
Bogus UFO Film / AAAS and Psi
Martin Gardner's 'Notes of a Psi-Watcher'

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the Skeptical Inquirer

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ON THE COVER: Photograph by Dana Fineman, DISCOVER Magazine, ©1983 Time Inc.

News and Comment

Survey of AAAS Scientific 'Elite': High Skepticism Toward ESP

The general public may believe in ESP and hold parapsychology in high regard, but a new survey of "elite" American scientists finds just the opposite true of them.

In fact the survey, conducted under the auspices of the University of Maryland Department of Sociology, found the scientists polled to have the highest level of skepticism regarding ESP of any major group surveyed within the past 20 years.

Sociologist James McClenon surveyed Council members and selected section committee members of the American Association for the Advancement of Science (AAAS) on their attitudes toward ESP and parapsychology. These members constitute a scientific elite, McClenon figured. They are in positions of leadership and are "an administrative elite within science and determine the legitimacy of emerging fields of inquiry."

He sent the questionnaire to 497 of these AAAS leaders and followed up with two postcard reminders. Seventy-one percent (353) responded.

Only 4 percent of the respondents said they consider ESP to be "an established fact." An additional 25 percent considered it a likely possibility. Thus only 29 percent of the scientists were favorably disposed to ESP. Fifty percent of them considered ESP either "a remote possibility" (41 percent) or "an impossibility" (9 percent). The other 21 percent rated it "merely an unknown."

Although some other studies have hinted that belief in ESP may be increasing among the general population and among the scientific community, "the elite scientific group polled by this study demonstrated the highest level of skepticism of any major group surveyed within the last twenty years," said McClenon. His survey findings are published in the *Journal of Parapsychology* (vol. 46, no. 2). The issue was distributed in January 1983, although it carries a June 1982 date. The survey was conducted in January and February 1981.

The results are in dramatic contrast to those found by the late Chris Evans in his poll of readers of the English weekly *New Scientist* in 1973. McClenon calls that "the most extensive survey of attitudes toward parapsychology to date." From 1,416 respondents to the Evans poll in 71,000 copies of that issue of *New Scientist* sold, Evans found a surprisingly high level of belief, with 67 percent of the returned polls saying ESP was either an established fact or a likely possibility. Of course a self-selection process (Were "believers" more prone to respond?) could well have had some influence on those results.

More recently, Wagner and Monnet in 1979 (*Zetetic Scholar,* no. 5) randomly sampled college professors and found that 66 percent were favorably disposed to ESP, while 23 percent considered it a remote possibility or an impossibility. A Gallup poll in 1978 found 51 percent of adults surveyed believed in ESP.

"It seems certain," says McClenon of his results, "that this population of elite scientists is far more skeptical concerning the existence of ESP than the average college professor or the average responder to the *New Scientist* poll."

McClenon's survey, as did Wagner and Monnet's, finds that psychologists—probably the scientists best in a position to judge—have become especially skeptical of ESP. If one considers "believers" to be those who answer that ESP is either "an established fact" or "a likely possibility," only 5 percent of the elite psychologists in the McClenon survey are believers in ESP. This is an even more hostile attitude than in earlier studies. Surveys of members of the American Psychological Association by Warner and Clark in 1938 and by Warner in 1952 found 8 percent and 17 percent, respectively, to be believers.

In the McClenon poll, anthropologists and historians/philosophers of science were even more skeptical than psychologists. Zero percent of the members of those AAAS sections responding were believers. The highest levels of belief were among pharmaceutical scientists (60 percent), engineers (40 percent), and "general" (42 percent). (The general membership section of AAAS is the one the Parapsychological Association is affiliated with.)

In response to another question, 14 percent of the elite scientists said they felt the investigation of ESP was

not a legitimate scientific undertaking. This percentage is "greater than has been found in any major study," says McClenon. In no other study cited has this figure been above 10 percent.

The elite scientists were also far less prone to have had an ESP experience than the populations in previous surveys.

The most common reason given by the elite scientists (mentioned by 80 percent of them as "very important" or "extremely important") to explain scientific resistance to parapsychology was "there is insufficient evidence for psychic ability." The second most common reason was that "scientists feel that, on the whole, parapsychological research has not been conducted in a

competent manner." This will not be of much comfort to parapsychologists, who in a previous poll of their own members asserted that one of the leading reasons for scientific resistance is that "parapsychology threatens the established mechanistic world view of scientists." Only 11 percent of the elite scientists give that view much importance. Parapsychologists also cling strongly to the rationale that scientists are skeptical because "scientists are simply unfamiliar with the present evidence." The elite scientists gave that argument low importance.

The results show that, whatever the general public and other college professors may believe, parapsychologists will have to come up with much more solid evidence and show greater scientific sophistication before either their field or the alleged phenomenon of ESP achieves more legitimacy among the U.S. scientific leadership.

There is also at least some irony in the discovery that the AAAS's leaders are so overwhelmingly skeptical of ESP. Ever since the Parapsychological Association's controversial admittance as a AAAS affiliate society in 1969, the AAAS connection has regularly been cited by supporters as evidence of a growing scientific acceptance of parapsychology. The survey shows no signs of any such groundswell of support.

—Kendrick Frazier

Parapsychologists, Critics Agree to Consensus Statement

The debate over parapsychology in West Germany, even more so than in the United States, has proceeded along lines best described as acrimonious. To try to see if some constructive dialogue might be achieved, an informal meet-

Attitudes Toward ESP

In your opinion ESP is:	Evans—New Scientist readers (1973)	Wagner & Monnet—College Professors (1979)	McClenon—AAAS Elite Scientists (1982)
An established fact	25%	16.3%	3.8%
A likely possibility	42	49.3	25.4
Merely an unknown	12	10.9	21.2
A remote possibility	19	19.4	41.0
An impossibility	3	4.1	8.6

Source: McClenon, *J. Parapsychology* 46(2):127-52 (1982).

ing to discuss the future relations between parapsychologists and external critics of parapsychology was held last November in Marburg, West Germany.

Three young German parapsychologists—Eberhard Bauer, Gerd Hövelmann, and Walter von Lucadou—met with Irmgard Oepen, professor of forensic medicine at Marburg University and one of the best-known skeptics in West Germany. Acting as "amicus curiae" at the meeting was Piet Hein Hoebens, the Amsterdam journalist who frequently reports on parapsychology controversies. (He wrote the investigative articles on the Dutch "clairvoyant detective" Gerard Croiset in our Fall 1981 and Winter 1981-82 issues and the report on the Cambridge psychical research centenary meetings in our Winter 1982-83 issue.)

There was one specific dispute at immediate issue. It concerned a recently published doctoral thesis that warned against medical pseudoscience. Hövelmann had taken issue with the thesis's discussion of parapsychological topics; Oepen had taken issue with Hövelmann's criticisms. At the Marburg meeting the participants expressed appreciation for the thesis's attempts to warn the medical world and the public against certain pseudoscientific movements that try to take on scientific respectability by mimicking scientific terminology.

The larger purpose of the meeting, however, was to see if some of the apparent hostility between parapsychologists and their critics in Germany might be a result of misunderstandings that could constructively be dispelled. The participants worked to recognize common interests despite their differences in perspective.

"We reached agreement on a surprising number of issues," says Hoebens. In a report of the meeting to the German *Zeitschrift für Parapsychologie,* Hoebens listed a number of statements all the participants found they could agree to.

They were in agreement on nine basic points:

1. A commitment to the study of parapsychology does not necessarily entail a commitment to the belief in the reality of "paranormal" factors.

2. "Psi" is a *hypothesis.* Given the present state of the parapsychological evidence it cannot be rationally maintained that it is a fact established beyond scientific doubt.

3. Even if "psi" exists—which can be doubted on rational grounds—very little if anything is known about its operations and its limitations. For this reason, claims of practical applications of "psi" should be treated with extreme caution.

4. Such considerations apply a fortiori when claims are made for medical applications of "psi." As here the health of human beings is at stake it seems better to err on the side of skepticism than to err on the side of credulity. In general, people should be discouraged from believing in miracle cures, especially of serious afflictions for which competent medical treatment is urgent.

5. While, on a scientific level, parapsychologists are only responsible for their own work and their own statements, they have a special social responsibility in that it is incumbent on them, unambiguously and openly, to disassociate themselves from pseudoscientists, occultists, crackpots, and charlatans who claim scientific parapsychological support for their questionable claims.

6. In the interest of mental hygiene and with specific reference to the social and medical risks of uncritical acceptance of "paranormal" claims responsible parapsychologists should stress the *speculative* nature of many of their concepts, be candid about the controversial status of paranormal claims, and, in making factual assertions, not go beyond what is warranted by the evidence.

7. Responsible parapsychologists and responsible critics should seek cooperation in exposing fraudulent or otherwise irresponsible claims.

8. The debate over parapsychology should be conducted in a spirit of fairness and truthfulness. Each side should attempt to defend its point of view on the basis of accurate information. Misrepresentation of the other side's position should be avoided. Polemical exchanges are to be welcomed, but they should be devoid of demagoguery, dogmatism, and cheap insults.

9. Participants in the debate should try to keep their own house in order. This implies a moral and intellectual obligation to criticize not only the "opponents," but also the "allies," whenever they depart from the rules of rational discourse.

The agreement over these statements may well be an important achievement. Almost all are points critics and observers of parapsychology have in one way or another pressed for in the past.

Hoebens says the discussions were amiable. He and the others hope that such talks and the agreed-upon statements might serve as a model for other dialogues between parapsychologists and their outside critics. He expressed hope that the outcome of the meeting will be favorably received by "all those who are sincerely interested in the search for the truth—whatever the truth in the matter of parapsychology may turn out to be."

Finally, Hoebens told the SKEPTICAL INQUIRER: "I think that it is of considerable interest that three respected parapsychologists—all members of the Parapsychological Association—have now formally committed themselves to the position that psi is basically no more than an unproven hypothesis."

—*K.F.*

A Small-Scale Test Of an Astrological Claim

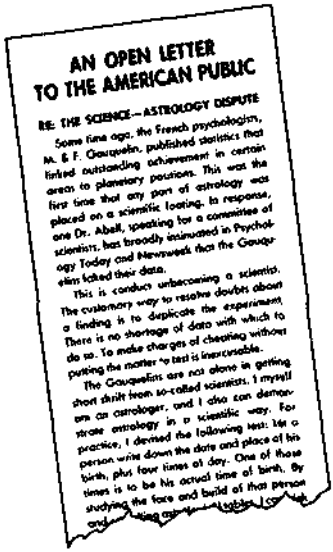
Late in 1982, by means of an advertisement in the *Washington Post,* John McCall of Hightown, Virginia, loudly announced that "part of the astrological code has indeed been broken"—by him. He challenged UCLA astronomer/CSICOP fellow George O. Abell and other "so-called scientists" to test his wonderful discovery and "prove once and for all that there is a scientific basis to astrology."

"I have offered to perform this feat for 29 of the most prestigious institutions in America," said the advertisement, "including UCLA, where Dr. Abell hangs his hat. The response: dead silence . . . In my case, they appear to be stonewalling and betting that the public will never be the wiser."

Well, George Abell responded as soon as he heard of the ad. He declined to test McCall, feeling that I would be a more likely person to handle human subjects. After all, George deals with vast galaxies beyond ordinary human ken, therefore it seemed my duty to test this marvel. It appeared to be a quite straightforward test.

McCall claimed that if a person gave him the "date and place of his birth, plus four times of day" he could tell which one of those times was the correct birth-time simply by "studying the face and build of that person and consulting astrological tables." He advertised that his "practice percentage is above 80."

That seemed a clear and simple test, easily done for little or no money. I agreed to have astrologer McCall come to my home to try his skill on five subjects I would provide. The date was set for a Friday in February 1983, when a CBS-TV crew would be filming me for a news spot.



AN OPEN LETTER
TO THE AMERICAN PUBLIC

RE: THE SCIENCE—ASTROLOGY DISPUTE

Some time ago, the French psychologist, M. & F. Gauquelin, published statistics that linked outstanding achievement in certain areas to planetary positions. This was the first time that any part of astrology was placed on a scientific footing. In response, one Dr. Abell, speaking for a committee of scientists, has broadly insinuated in Psychology Today and Newsweek that the Gauquelins faked their data.

This is conduct unbecoming a scientist. The customary way to resolve doubts about a finding is to duplicate the experiment. There is no shortage of data with which to do so. To make charges of cheating without putting the matter to test is inexcusable.

The Gauquelins are not alone in getting short shrift from so-called scientists. I myself am an astrologer, and I also can demonstrate astrology in a scientific way. For practice, I devised the following test: Let a person write down the date and place of his birth, plus four times of day. One of these times is to be his actual time of birth. By studying the face and build of that person and [illegible]

Portion of McCall's ad making claim.

A short comment: It is well known that there is a slight but distinct tendency for births to occur preferentially early in the morning. McCall had specified that the four birth-times had to be at least an hour apart, and I arranged that it be a two-hour interval to give him a good spread.

He also had cautioned me not to select anyone in an advanced state of senility. Nor could he handle non-Caucasians—since their coloration might conceal subtle facial characteristics. No Caesarian or induced births were answerable to his powers, he added. The claim began to appear less wonderful, but since I have enough friends of the required classification, I assembled them during a raging snowstorm; and we awaited McCall.

Upon arrival, he cheerily announced that he had just examined the ephemeris and found that the signs pointed to a particularly good day for him. He would not have been able to do it the next day, he told us, since that was in a very inauspicious period. We were all happy to hear this reassuring news, and looked forward to a startling demonstration of his great discovery.

The seer agreed, upon questioning, that all his requirements had been met. We notified him that birth certificates were available to him following the test, should he doubt our veracity. He predicted success, and the test began. He labored over the tables, leafing back and forth in several books and pecking at his calculator occasionally. He scrutinized the subjects carefully, frowned, and scribbled strange symbols on his pad. More tables and much thinking, with a little more observation of the subject, and he would confidently announce which of the four birth-times supplied was the correct one. Since I was performing double-blind, I merely marked down his choice, not knowing whether he was correct.

The moment of truth arrived. I reminded McCall that, though the amount of data was the minimal required to demonstrate his 80 percent success rate, he had said that he should be a winner, due to all conditions being met and his fortunate celestial aspects at that moment, by his own determining. We then opened the envelope containing the correct birth-time data.

And the winner is: The Law of Averages. McCall had scored according to chance—one correct guess out of five. (A chance score would have been one right out of four, but there were five subjects in the test.)

Asked by the CBS-TV people to explain his failure, McCall explained that the subjects were not of "racially pure" types and that it was therefore difficult. But that had not been mentioned previously. He had looked over these subjects and had been satisfied. Was he now deciding that they were unsatisfactory because he had failed to correctly guess the answers? If chance alone were operating, he had 1 in 64

odds of achieving his proclaimed 80 percent success rate. But he'd told us that he had done "hundreds" of people before to attain his 80 percent success rate.

I agreed, as usual, to test his powers again. This time, we agreed, we would use 20 subjects. When we get around to that test, I'll report again. But don't put any money on McCall. At least he can no longer complain, as he did in his advertisement, that he has gotten "short shrift from so-called scientists." George Abell placed him in my hands, and he got all the shrift he could handle.

—*James Randi*

On the Trail of the Buena Foot 'Monster'

One day as I labored mightily to educate some fifth-grade computers/science students on the folly of the news items on the paranormal they bring into class, one of them came up waving a paper, saying, "Yeah, well, how about this?"

"This" was a copy of that day's *Los Angeles Herald Examiner* with a front-page picture-story headlined "The Monster Search Gets Serious" (May 13, 1982). Before going on, I went back to my desk and checked the front page of the *Los Angeles Times,* but apparently the more staid paper had passed on this bulletin from the world of the freakish. It is to be recalled that the founder of the *Herald Examiner,* upon hearing from his man in Cuba that there was no war there (c. 1899), replied, "Well, start one." That standard of journalism holds to this day.

But I had told the students that any piece of paranormal nonsense they saw they should bring to class, and we would check it out. We checked out a story about a UFO kidnapping an Argentinian farmer only to find that if the directions given in the article were accurate the poor farmer was actually in Paraguay, and the saucer had landed to the amazement of "top scientists," about 700 miles away. Apparently, the author of the piece couldn't read the atlas as well as my fifth-graders.

So we began to look into a story that was not from long ago and far away, but from just down the freeway in Buena Park, California. The tale begins with apartment managers Frank and Lorraine Missanelli, who heard a noisy growl and smelled something awful out behind their complex at 7601 Franklin. Then they saw the source, which Lorraine said was "too hairy and smelled too bad to be human." Four junior-high-school students, all girls, also saw the beast and ran to tell their school officials. The poor things received—can you believe it?—"only a joking response." The beast was described as being 7 to 9 feet tall and always "smelling awful." Just after this appearance, the thing had popped back into one of the giant concrete flood-control channels.

Before long, however, some of the adults had gained some response other than joking. Tom Muzila and Dennis Ruminer, representing a paranormal investigation group known as Special Forces Investigation, arrived and set up shop. Within hours they had discovered imprints they claimed came from a "heavy, huge-thumbed, four-digited creature."

My students were asked at this point what they thought. Looking at the drawing in the paper, one boy said he thought it was a bum. The police were not impressed either. Spokesman Terry Brannum said they had no evidence to support the existence of "Buena Foot." The most sensible line of the early investigation came from

Monster! Artist's drawing of Buena Foot "monster" based on eyewitness accounts.

Monster? Photo of transient police said was mistaken for monster by Buena Park residents.

Muzila, who said, "The problem is that, when you investigate something like this, everybody goes freako."

Later in the case, free-lance photographer, technical writer, and paranormal investigator John De Herrerra staked out the area and waited. Soon he spotted a large, dirty man with a filthy beard walking down the street. He pulled his van up to the man and repeated the story of Buena Foot.

The man simply said, "I don't know nothing about no Big Foot." Then he walked off, but not before De Herrerra took some pictures of him. The *Examiner* reported this on May 14, getting De Herrerra's name wrong, and balancing it with claims of a "coverup" from the citizenry. But on May 15 De Herrerra's pictures were published with an article quoting the police as saying that the transient "fit the descriptions [of the monster] on at least seven points" and that the monster claim could therefore be retired. The matter should have been laid to its proper rest, but Frank Missanelli would not let it go. "I don't believe it," he railed. "The police mocked it all along and now they're trying to get out of it."

David Bianes, 25, who also saw the creature and said it couldn't have been human, vowed to keep on looking.

My fifth-graders, as well as my sixth-, fourth-, and third-graders, thought the whole thing was silly and went on to other things. That, I think,

says something about the wisdom of our youth. We may hope they will retain some of this skepticism when they hear about the next Buena Foot!

—Bob Dobson

Bob Dobson teaches computers/science in the Wilshire Crest Elementary School in Los Angeles.

Pring UFO Photo Solved, Polygraph Test Avoided

A curious photo showing two bright UFOs against a background of a starry sky graced the cover of the March-April 1982 issue of *International UFO Reporter* (*IUR*), published by J. Allen Hynek's Center for UFO Studies (CUFOS). The photo was a time exposure intended to capture a meteor shower, taken after midnight on August 12, 1981, by Rupert Pring, of Anderson, Indiana, in the company of his wife.

The CUFOS feature article about the incident said: "It is our opinion that a hoax can be excluded; all the evidence and study so far argues solidly against that . . . short of accusing both witnesses of egregious falsification, totally out of keeping with their known characters, the photo must be regarded as genuine." But CUFOS acknowledged that the twin UFOs could have a prosaic explanation and said the case still was under investigation.

Pring said he had driven to a rural area to take time-exposures during the Perseid meteor shower then in progress. He said he had set up his 35-mm camera on a tripod and was taking a series of 15-minute exposures. At about 2:15 A.M., he reported that two bright UFOs flew over his car, momentarily hovered, then disappeared rapidly to the southeast. In so doing, the two UFOs had been caught in one of his time exposures.

Pring said that, when he jumped out of his car for a better view of the UFOs, "I felt like something heavy was pushing down on my head and shoulders"—seemingly a UFO-induced effect. And he said he suffered nausea for the next three days as well as a brief loss of memory.

There was one slight discrepancy in Pring's story. He claimed that his camera had been aimed almost vertically at the time the UFOs flew overhead and that they had been filmed. But the stars in his photo offered astronomer Hynek an opportunity to check this detail based on the known star positions. As the *IUR* reported, "Assuming the time to be correct, the camera could not have been vertical, but pointing . . . east. If the camera was pointing vertically and the time was also correct, then the date [when the photo was taken] was not Aug. 12 but the middle of September." But *IUR* added: "None of this detracts one bit from the value of the photograph."

The next issue of *IUR* carried a brief report indicating that some readers had written in to suggest possible prosaic explanations for the Pring photo. Apparently some suggested the photo might be a hoax, but *IUR* said that Pring would "have had to have professional assistance in perpetrating a hoax. Finally, to what purpose?" *IUR* added that Pring had volunteered to take a polygraph ("lie-detector") test to substantiate his story.

An article in the subsequent issue of *IUR* (July-August 1982), written by CUFOS investigator Mark Rodeghier, began: "A positive but mundane identification of the Pring UFO photo . . . has been arrived at as a result of tests, made on location by Dr. Hynek and myself, in Mr. Pring's presence. *The photo, however, seems not to be a hoax*

but a misidentification." (Emphasis added.)

Rodeghier reported that he and Hynek had visited Pring at his home on March 31, 1982, and met with friends and neighbors who were unanimous in endorsing Pring's character. "These comments only served to reinforce our initial perception of him as a man to be trusted, who would not knowingly falsify details concerning his UFO sighting." That night, Hynek, Rodeghier, and Pring drove to the farm where he had made the original photo and they made a number of test shots using both Pring's camera and Hynek's stereo camera. These included photos of bright mercury-vapor lights in a nearby farmyard.

Pring continued to insist that the UFOs had departed directly to the south, despite the incontrovertible evidence of relative star positions. When Pring was asked to open his camera's shutter and swing the camera from vertical to horizontal and back, in order to film the bright farmyard mercury lights, "the results give the solution to the mystery," Rodeghier wrote. "These bright trails, under close examination, exhibit the same 'strobe effect' shown by the trails on the original photo and their separation and light-ratio on the test photo match exactly those of the mystery lights on the original photo . . . Thus, formally, the Center suggests that the source of the Pring mysterious photographed lights is quite clear: two farm lights at a distance of between one-quarter and one-half mile."

But Rodeghier was not convinced that Pring was attempting a hoax. He explained: "Pring must have inadvertently failed to close the shutter of his camera (because of the excitement on seeing the bright lights pass over his car, which he insists did happen) and, as he went to remove the camera from the tripod, swung the camera first along a north-east line and then at right angles to the southeast."

The CUFOS investigator thus concluded it was just a simple case of misidentification. Pring saw two genuine UFOs but inadvertently photographed two nearby mercury vapor lights in a farmyard which he mistook for the UFOs. If true, it is surprising that Pring did not take additional photos of the "farmyard UFOs" inasmuch as they did not suddenly disappear.

Yet it would seem that Rodeghier and Hynek had some suspicions of a hoax, because they asked Pring if he would take a polygraph test and "he agreed without hesitation," according to Rodeghier. And so CUFOS agreed to underwrite the cost of the test and Pring's travel expenses from his home in Indiana to Chicago, where the test would be given by an experienced polygraph examiner, Jeffrey Gwynne.

Pring came to Chicago, and together with CUFOS representatives they went to visit Gwynne, director of the Institute for Advanced Criminal Science Studies at the Reed College of Polygraphy in Chicago.

Gwynne and Pring were closeted privately, as is the custom, so the examiner could become acquainted with the subject and formulate test questions. During that interview, "A most unexpected development occurred," according to Rodeghier. Pring for the first time reported that he and his wife believed they had been abducted and taken aboard a UFO for physical examinations the night he shot the UFO photo—something that the Prings had not even mentioned in previous discussions with Hynek and Rodeghier.

According to Rodeghier, the experienced polygraph examiner admitted that he would not know what sort of questions to use to evaluate this part of the Prings' story. Apparently it did not occur to CUFOS to suggest that the

test be limited solely to details surrounding the UFO photo itself. If Pring failed such a test there would be reason to dismiss the tale of UFO abduction. But CUFOS agreed to an indefinite postponement of the polygraph test and Pring returned home, untested.

Rodeghier concludes that "it is possible that Mr. and Mrs. Pring did have a 'genuine Close Encounter of the Third Kind,' the details of which will probably continue to be revealed."

Still a question comes to mind: If Mr. and Mrs. Pring ever were to admit that the UFO photo was a hoax, would CUFOS be convinced that it was a hoax? Or would CUFOS suspect that perhaps the Prings had been brainwashed into making this admission via hypnosis administered while they were aboard a flying saucer?

—*Philip J. Klass*

Bay Area Skeptics: A Lively Newsletter

The Bay Area Skeptics, the first local group inspired by CSICOP (*SI,* Fall 1982, p. 15), has become increasingly active and influential in promoting the critical examination of paranormal claims in the greater San Francisco area. The group holds regular meetings, aggressively challenges self-proclaimed psychics, works to get a balanced viewpoint on the paranormal into the news and entertainment media, and publishes a monthly newsletter.

The newsletter, *BASIS,* running 4 to 6 pages per issue, is an informal and chatty information sheet packed with news of the group's latest activities and meetings, editorials, book reviews, little tutorials on skeptical inquiry, and interesting miscellany. One of the recent issues, for instance, tells of the group's small expedition to hear a lecture by a "Breatharian," a person who claims to subsist solely on sunshine and air, without any food whatsoever. There is also a lengthy discussion about the host of a local talk-show who contends that scientific testing is not applicable to dowsing and psychic phenomena. There is the first of a series of columns "hoisting seers of the future by their own petards by the artless device of keeping track of what they say or write and seeing if it came true." And there are various commentaries about the best way to go about countering the glut of paranormal claims.

The newsletter's specific contents reflect the group's focus on the Bay Area (a hotbed of paranormal interest), but the issues the members are attempting to cope with are common to skeptical inquirers everywhere. Persons actively concerned about such matters in their own communities may find it useful. One-year subscriptions are available for a $5 donation. Send a check to: Bay Area Skeptics, Box 659, El Cerrito, CA 94530.

—*K.F.*

Swedish Science Group Now Established

In the Winter 1982–83 SKEPTICAL INQUIRER, plans were announced to form a committee for science and popular education in Sweden. The committee was established as of December 4, 1982. The Swedish name of the committee is "Vetenskap och Folkbildning"; we have not yet adopted an official English name. The purpose of the organization is described in our statute in the following way:

The task of *Vetenskap och Folkbildning*

is to further popular education on the methods and results of science. In particular the Society will prepare and publish refutations of erroneous claims in questions that are decidable by scientific means. An important part of popular education on science is to make clear which questions can, and which cannot, be settled by science.

The Society acknowledges the principles of political democracy. The Society is politically uncommitted and takes no stand on questions of religious faith.

The last sentence, of course, does not detain us from criticizing creationism or other pseudoscientific claims connected with religion. We do not consider empirically decidable questions to be questions of religious faith.

Our attitude toward the paranormal is essentially the same as that of CSICOP. Some public debate has taken place in Swedish newspapers on our ideas since our Society was formed. Among the topics now under discussion among ourselves are:

- The debunking of a report from a Swedish university purporting to prove astrological claims. (One article published, another under way.)
- Pseudoscientific lectures on the paranormal arranged by another Swedish university. We have decided to write to the university and at the same time publish our critique.
- Creationism in Sweden (much weaker than in the U.S.A., but not to be neglected).
- Claims made by a film company in their advertising that the existence of ghosts is scientifically proven. We have written to them and asked a few questions relevant in the context.
- Some cases of quackery. We intend to form a subcommittee on quackery.
- Classification of pseudoscientific literature in the catalogues of Swedish public libraries. Two librarians are making a small study of this, and we intend to contact the organization that makes the classifications for all public libraries. (Classifying von Däniken as history, etc.)
- We discuss how we can provide information to the mass media.
- We are preparing a list of knowledgeable persons in different fields who are willing to answer questions from journalists on pseudoscience and the paranormal.

We do not now feel ripe for publishing a journal. Instead we write analytical articles in existing newspapers and magazines. We have a newsletter for our members. We have decided to try to find a publisher willing to cooperate with us and publish an anthology on pseudoscience in Sweden.

The executive board consists of: Berndt Brehmer (vice president), Lena Carlsson (secretary), Sverker Gustavsson (treasurer), Sven Ove Hansson (president), Arne Helldén, Ulf Ivarsson (vice-secretary), Lennart Melin, Nils Trowald, and Gertrud Westerfors.

We hope interested readers will tell others of our existence and of our interest in international cooperation. Our mailing address is: Vetenskap och Folkbildning, Box 185, 101 22 Stockholm 1, Sweden.

—Sven Ove Hansson

Anti-Astrology Packet

The Astronomical Society of the Pacific has prepared an information packet for the public critiquing astrology. It is designed to provide students, teachers, librarians, and the general public with clear, specific information debunking astrology. It includes several articles outlining the dozens of scientific tests

showing astrology does not work, an annotated bibliography of further readings, and an interview on the subject with astronomer George Abell. Copies of the packet are available for $2.00 each (to cover costs) from: Astronomical Society of the Pacific, Astrology Packet Dept., 1290 24th Ave., San Francisco, CA 94122.

—*K.F.*

Libraries and Hoax Books

How should libraries handle the cataloguing of pseudoscience books? That's a big issue. What about something more specific. What should they do about a book originally thought to be a science fact, later judged to be a hoax?

Sanford Berman is a professional librarian, and an expert on cataloguing. He also writes a "Consumer, Beware!" column for a library publication, *Technicalities.* In a recent column he issued a "Hoax Alert" concerning the 1978 Lippincott book *In His Image: The Cloning of a Man,* by David M. Rorvik, and told what his library had done as a result of the court ruling declaring the book "a fraud and a hoax" (*SI,* Fall 1982). At his Hennepin County Library (Minnetonka, Minnesota), Berman says they added this note in the catalogue: "Work declared a 'fraud and hoax' by Philadelphia judge; publisher conceded 'the story to be untrue' in 1982." They also added these subject headings: "2. Fraud in science. 3. Hoaxes." "Finally," says Berman, "we reclassed the book to 001.95 [Deceptions and Hoaxes], where it should rightly and comfortably cohabitate with material on Piltdown Man."

—*K.F.*

Amazing Discovery! 'Enquirer' Gives Birth to Clone!

"Top Government UFO Official Is a Space Alien!" "You Can Call the Dead—Collect." "Woman Gives Birth to Self."

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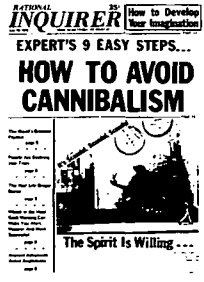

The "Irrational Inquirer" (1983) and one of its lead stories (left); the 1978 "Rational Inquirer" (right).

of the *National Enquirer*? Sounds like it. Also, the tabloid looks just like the *Enquirer*. But take a closer look at the logo. It is the *Irrational Inquirer*. Apart from that the only difference between it and the supermarket tabloid that we've all come to know and love is that the words "Big Fat Parody Issue" appear on the cover. The parody of the sensational tabloid appeared on newsstands early in 1983, complete with a warning to readers to "beware of a sleazy tabloid imitating the *Inquirer*. Calling itself the *National Enquirer*, the paper looks just like ours, except everything inside is fake!"

It was hard to tell the difference. The headlines and articles were in prime *Enquirer* style. "Amazing Discovery Can Add Up to 500 Years to Your Life." "World War III Has Happened." There was even a two-page section on psychic predictions. "The Cure for Cancer Is Found, but Moments Later It Is Lost Again," blared one. "A Major Cure for Stupidity Will Be Announced," said another.

Apparently published by High Meadow Publishing of New London, N.H., it is reminiscent of an earlier, less widely disseminated parody, the *Rational Inquirer*, prepared by comedian Donald E. Stevens of San Francisco in 1978 ("People Evolving Into Trees" and "Astral Projector Trapped Outside Body!" were two of its memorable headlines). Like Stevens's, the latest parody issue struggles with one central problem: It is difficult to concoct anything so outrageous it doesn't seem like usual *Enquirer* fare. It is hard to out-parody the real *National Enquirer*.

—*K.F.*

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Notes of a Psi-Watcher

Lessons of a Landmark PK Hoax

This is the first installment of a new column by Martin Gardner that we are pleased to announce will appear in each issue of the SKEPTICAL INQUIRER *from now on.—*ED.

The most significant recent event on the psi front was James Randi's Project Alpha. Since Randi himself gives the details in this issue, I will make only general comments.

Was it unethical? I think not, but before explaining why let's consider a few past instances in which deception was used to demonstrate the incompetence of researchers.

Early this century René Blondlot, a respected French physicist, announced his discovery of a new type of radiation, which he called N-rays, after the University of Nancy where he worked. Dozens of papers on N-rays were soon being published in France, but American physicists were dubious. One skeptic, a physicist at Johns Hopkins University, Robert W. Wood, enjoyed playing practical jokes, especially jokes on spirit mediums. His humorous book *How to Tell the Birds from the Flowers* is still in print. Perhaps you have seen on TV a little pinheaded, bald creature with a huge flexible mouth that is produced by painting eyes and a nose on someone's chin, then viewing the chin upside down. It was Wood who invented this whimsical illusion.

In 1904 Wood made a trip to Nancy to observe N-ray research first hand. In one experiment he secretly removed from the apparatus an essential prism. This had no effect on what the experimenters said they were observing. In another test Wood surreptitiously substituted a piece of wood for a steel file that was supposed to be giving off N-rays. The imagined radiation continued to be reported by the Nancy scientists. Wood told his hosts nothing about either prank. Instead, he went home and wrote a devastating account of his visit for the British magazine *Nature.* It was a knockout blow to N-rays everywhere except at Nancy.

The reaction of the Nancy group to Wood's disclosures was well summed up by Irving Klotz in his fine article "The N-ray Affair," *Scientific American,* May 1980:

> According to Blondlot and his disciples, then, it was the sensitivity of the observer rather than the validity of the phenomena that was called into question by criticisms such as Wood's, a point of view that will not be unfamiliar

to those who have followed more recent controversies concerning extrasensory perception. By 1905, when only French scientists remained in the N-ray camp, the argument began to acquire a somewhat chauvinistic aspect. Some proponents of N-rays maintained that only the Latin races possessed the sensitivities (intellectual as well as sensory) necessary to detect manifestations of the rays. It was alleged that Anglo-Saxon powers of perception were dulled by continual exposure to fog and Teutonic ones blunted by constant ingestion of beer.

When N-rays became a huge embarrassment to French science, the journal *Revue Scientifique* proposed a definitive test that would settle the matter. "Permit me to decline totally," Blondlot responded, ". . . to cooperate in this simplistic experiment. The phenomena are much too delicate for that. Let each one form his own personal opinion about N-rays, either from his own experiments or from those of others in whom he has confidence." Like Percival Lowell, the American astronomer who drew elaborate maps of Martian canals, Blondlot could not prevent his strong desires from strongly biasing his observations. He lived another quarter-century. If he had any doubts about N-rays, so far as I know he never expressed them.

Move ahead to 1974. J. B. Rhine had appointed Walter J. Levy, 26, his successor as director of his laboratory. Levy was already famous in psi circles for his "carefully controlled" investigations of animal-psi. (One of them suggested that embryos in chicken eggs had psychokinetic [PK] powers.) Three older members of Rhine's staff were suspicious of Levy's string of successes. What did they do? They set a cruel trap. While Levy was testing the PK ability of rats to alter a randomizer, they watched through a peephole and saw Levy repeatedly beef up the scores by pulling a plug. Better yet, they installed another set of instruments, without Levy's knowledge, that kept an accurate score. The untampered record showed no evidence of PK. Levy confessed, and vanished from the psi scene.

To me the saddest aspect of this scandal was not Levy's deserved disgrace but the fact that it had never occurred to Rhine to check on Levy's honesty. Rhine himself was deeply shaken by the revelations. If the trap had not been set, Levy's papers would still be cited as strong evidence for animal-psi.

There are two reasons why traps to detect fraud are more essential in PK research than anywhere else. First, the claims are far more extraordinary and therefore require much stronger evidence. Second, the field has always been soaked with fraud. In the days when eminent physicists were convinced of the reality of floating tables and glowing ectoplasm, an enormous service to science was performed by Houdini and others who were willing and capable of setting traps for the mediums.

This brings us to the main moral of Randi's hilarious hoax. Paranormal metal-bending is so fantastic a violation of natural laws that the first task of any competent experimenter is to determine whether a psychic who bends spoons is cheating or not. In England, when physicists John Taylor and John Hasted were convinced that scads of children could twist cutlery by PK, one would have expected the two scientists to devise some elementary traps, but they did not. The only good trap was set by two sociologists at the University of Bath who did not even mean to set it. Puzzled by the fact that no one ever *sees* metal bend—Taylor called it the "shyness effect"—they put some spoon-bending young-

sters in a room, then filmed them through a one-way mirror. The purpose was not to embarrass the children, but to record the shyness effect. To their amazement, they saw the children cheating. Taylor soon became disenchanted, but such revelations had no effect on Hasted's mind-set. Some spoon benders cheat, so what? Not in *his* laboratory. You can read all about his naive experiments in his recently published book, *The Metal Benders.*

Hasted and Phillips typify psychic research at its shabbiest. In spite of many letters from Randi telling him that his two young subjects were frauds, Phillips made no effort to check on their backgrounds. Not until the very end, after Randi had severely criticized his videotapes, did he start to tighten controls. Of course the wonders ceased. On many occasions when controls were unbelievably lax, the two "psychics" suspected a trap. It was never sprung. They overestimated the acumen of their monitors.

Think what the results might have been had the boys decided to become professional psychics. They would have left Phillips's lab complaining that excessive controls were inhibiting their powers. Soon they would be appearing on TV documentaries as wonder workers whose powers had been validated by respected scientists. Uri Geller never tires of talking about how the Stanford Research Institute (now SRI International) validated his psychic abilities. Phillips's two young subjects are even better than Geller. One of them invented a way to make one tine of a fork visibly and unshyly bend that is superior to any of Geller's crude methods. When Steven Shaw demonstrated this lovely illusion at Randi's Manhattan press conference, the entire audience gasped. "Can you tell us how you did that?" a startled reporter asked. Shaw walked to the mike and said, "I cheat." It brought down the house.

It is to Phillips's credit that he had the courage to say (*Washington Post,* March 1, 1983), "I should have taken Randi's advice." It is to the credit of Stanley Krippner, a true believer in PK if ever there was one, that he called Randi's project "a much-needed" experiment. It remained for former CSICOP-member and sociologist Truzzi to start the hue and cry about entrapment. Truzzi had known about Randi's trap almost from the beginning, but had carefully kept his own trap shut. "Randi is hurting the field with his gross exaggeration," Truzzi told the *New York Times* (February 15, 1983). "In no way will his project teach psychic researchers a lesson and make them more likely to trust to magicians' advice. Quite the contrary. This outside policeman thing sets up magicians as the enemy."

On this point Truzzi may be right. I, too, would be surprised if psychic researchers suddenly decided to study conjuring or to seek the active help of knowledgeable magicians. Conjurors are indeed the enemy. Their bad vibes alone are enough to kill any PK powers just by being there as observers; perhaps (as has actually been suggested by the sociologists at Bath) even their *reading* about the experiments afterwards influences the outcome by backward causality! But perhaps Randi's scam will have a salutary effect on funding. After all, the half-million bucks the McDonnell Foundation gave to Washington University could have gone to worthwhile research instead of down the drain to a group unqualified to investigate metal bending.

Am I saying that all psychic researchers should be trained in magic, or seek the aid of magicians, before they test miracle workers? That is exactly what I am saying. The most

eminent scientist, untrained in magic, is putty in the hands of a clever charlatan. Without the help of professional deceivers—the conjurors—no testing of a superpsychic is worth ten cents of funding. That is the big lesson of Randi's hoax. That is why it is likely to become a landmark in the history of PK research.

—*Martin Gardner*

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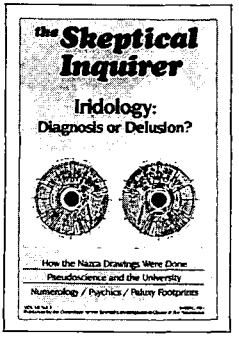

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Psychic Vibrations

Better late than never. The journal *The Unexplained* recently carried an article by Joseph Cooper telling how Elsie Wright and Frances Griffiths just recently confessed their role in a classic hoax: the "Cottingley Fairies," photographs taken 66 years ago in Yorkshire, England. The photos purported to show fairies with wings, flowing robes, and Pan's pipes, cavorting in the Cottingley beck and glen. The fairy photos have been cited as authentic by a number of credulous "paranormal researchers" and were endorsed wholeheartedly by no less a personage than Sir Arthur Conan Doyle. The women, Elsie nearing 80 and Frances older still, confess that they used paper cutout drawings of fairies and attached them with pins to nearby objects. In one instance, a pin is seen to be protruding from a gnome's stomach. The esteemed Conan Doyle is said to have interpreted this as an umbilicus, suggesting that fairies are born in a manner similar to humans.

However, despite the admission of the hoax, Frances continues to insist that one of the five fairy photos is absolutely genuine. (Perhaps Frances is like so many "genuine" psychics of our day, whose apologists claim they resort to trickery only when the real phenomenon refuses to cooperate.) Elsie, on the other hand, admits that all five fairy photos are fakes. However, there is one matter on which both women still agree: they both insist that

One of the "Cottingley Fairies" photos shows Frances and leaping fairy.

they really *did* see fairies in the Cottingley beck and glen back in 1917.

* * * * *

If there is one UFO group that is determined not to be taken by surprise by any eventuality, it is the Scientific Bureau of Investigation (SBI), which recently held a full-scale exercise simulating the crash of a flying saucer in the Adirondack Mountains. The *Schenectady Gazette* reports that 18 members of that organization hiked into the woods to a remote area where a 24-foot saucer-shaped craft had been constructed to add authenticity to the training exercise. SBI members, equipped with gas masks and Geiger counters, performed a simulated retrieval of the body of a dead space-alien. The group hopes to use the exercise to produce a manual and a training film so that its members will know what to do when an alien spacecraft really does crash.

* * * * *

The tempest in a teapot concerning the NOVA television documentary on UFOs (see *SI*, Spring 1983, pp. 17 and 19) has risen to ever-increasing levels of silliness. Walt Andrus, head of the Mutual UFO Network (MUFON), didn't like the show because it did not take seriously the kind of sensationalist UFO-abduction and crashed-saucer stories that his group relishes. Andrus angrily charged that the participants in the show were recommended by *SI*'s editor, Kendrick Frazier, when in fact all Frazier did was to provide names of several people to receive press releases about the program. J. Allen Hynek of the Center for UFO Studies (CUFOS) went even further into the realm of fantasy, claiming that Frazier was allowed to select the final participants in the program. This is a classic example of UFOlogists' drawing amazing conclusions from little or no evidence. (Hynek has since apologized to Frazier for the error.)

In another article, in CUFOS's *International UFO Reporter*, Hynek quotes journalist Linda Moulton Howe as saying that "NOVA can no longer be perceived as credible journal-

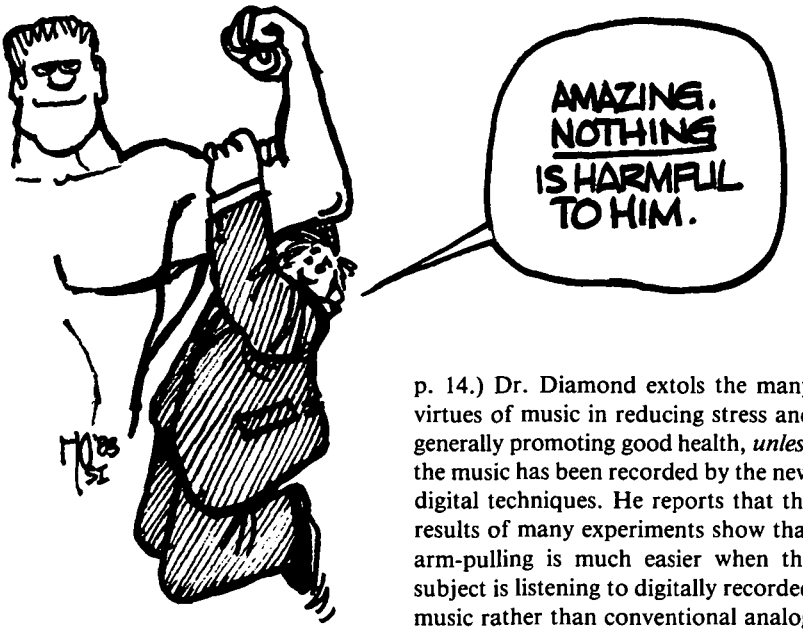
ism after this . . . I don't believe I have ever seen such a biased, lopsided story." Hynek calls Howe "a person who knows how documentaries should be produced" and "a credit to her profession." Who is Ms. Howe and is her work truly unbiased? Most of Hynek's readers were probably unaware of a story about her in the *Lincoln* (Neb.) *Journal* of November 15, 1982. Its title was "Cattle Mutilations Linked with Aliens," and the article reported that "Linda Moulton Howe, who wrote, produced, directed, and edited a television documentary on the subject . . ." suggested that the alleged mutilations were apparently performed using lasers. Howe's documentary includes the story told under hypnotic regression by a woman who claims to have witnessed two beings aboard a flying saucer mutilating a cow that they had levitated on board using a beam of light. Does CUFOS still have any journalistic credibility?

Other recent gems from CUFOS: Hans M. Schnitzler, age 75, wrote to tell of an alleged encounter with eight little beings from a UFO back in 1914. (The witness would have been 7 years old at the time.) "Suddenly," he reports, "they sang in beautiful harmony. Yes, gentlemen, they sang loud and clear a melody over and over again as if they wanted me to familiarize myself with it." They then filed back into their ship. CUFOS published Mr. Schnitzler's lengthy account with a notice that a recording of him playing the UFO creatures' music on his harmonica is available for any interested researcher.

Also, who should turn up as the latest victim of a "UFO abduction" but one of CUFOS's own field investigators, Barbara Schutte. (CUFOS has not exactly been trumpeting this amazing discovery; in fact, all of the major UFO organizations remained silent on the matter, the only one publishing Schutte's account being *Gray Barker's Newsletter.*) Ms. Schutte reveals that she was unaware of her own UFO kidnappings until she heard Jim Harder of the Aerial Phenomena Research Organization (APRO) talk about his experiences in "finding" previously unsuspected abductions. Leo Sprinkle of APRO, another champion abduction-finder, helped her uncover her own. Under hypnosis she recounted abduction experiences in 1959, 1973, 1981, and 1982, the 1981 incident occurring just two days after she attended a CUFOS conference. (Perhaps the UFO beings were curious to know what had been said about them by the leaders of UFOlogy.) Her abductor's name is said to be "Quaazagaw," and she has provided a helpful sketch of the suspect. She says she also suspects that she may have been abducted as many as four additional times, but those incidents haven't yet been confirmed. She also reports that she is receiving "channelings" from alien intelligences, as well as producing automatic writings. Now there's no need for Dr. Hynek to fly around the world chasing accounts of UFOs; his own people have started being snatched up by aliens.

* * * * *

If you've been feeling anxious lately, perhaps it's because of the way you've been trying to relax. So says John Diamond, M.D., who claims that listening to digitally recorded music provokes stress. Diamond is associated with the *Institute of Behavioral Kinesiology,* which might be more aptly titled "The Institute for Pulling Down Your Arm." (Arm-pulling is a practice much in favor by chiropractors and holistic healers. You hold your arm straight out at the shoulder, and the arm puller pulls hard if he wants to prove some-



thing harmful, or pulls lightly if he wants to show it's not. However, any healthy adult can pull down anyone's arm at any time, no matter how hard the person resists. For another account of arm-pulling, see *SI*, Summer 1982, p. 14.) Dr. Diamond extols the many virtues of music in reducing stress and generally promoting good health, *unless* the music has been recorded by the new digital techniques. He reports that the results of many experiments show that arm-pulling is much easier when the subject is listening to digitally recorded music rather than conventional analog recordings, indicating that the individual's "life energy" is thereby weakened. So if you want to *really* relax with a little music, better wind up that old Victrola. And we're not pulling your arm!

—*Robert Sheaffer*

The Requirements of Extraterrestrialism

There is a "UFO" phenomenon, in which spectacular and surprising events occur in the sky. But as scientists we know that there are a host of quite natural processes which can cause such events. To accept any of these events as being the work of extraterrestrial creatures, we require the event provide us with either: (1) An artifact, an object clearly not constructed by humans; or (2) A fact we did not know previously and which can be verified. So far, neither of these requirements has been met in any UFO episode.

—Frank D. Drake, Cornell University radio astronomer and leader in the scientific search for extraterrestrial intelligence

We here begin the first of a two-part report by James Randi on a novel experiment that is having ramifications throughout all parapsychology. —ED.

The Project Alpha Experiment: Part 1. The First Two Years

What would happen if two young conjurors posing as psychics were introduced into a well-funded university parapsychology laboratory?

James Randi

> *Generous funding doesn't make scientists smart. . . . Nor are they able to detect trickery without help. . . .*

When it was announced in 1979 that noted engineer James S. McDonnell, board chairman of McDonnell-Douglas Aircraft and devotee of the paranormal, had awarded a $500,000 grant to Washington University in St. Louis, Missouri, for the establishment of the McDonnell Laboratory for Psychical Research, it seemed the ideal opportunity to initiate an experiment I had contemplated for some time. It was designed to test two major hypotheses.

Parapsychologists have been lamenting for decades that they are unable to conduct proper research due to lack of adequate funding, but I felt strongly that the problem lay in their strong pro-psychic bias. The first hypothesis, therefore, was that no amount of financial support would remove that impediment to improvement in the quality of their work. Moreover, I have always been in accord with many others in the field—such as Stanley Krippner, current president of the Parapsychological Association—who insisted that qualified, experienced conjurors were essential for design, implementation, and evaluation of experiments in parapsychology, especially where deception—involuntary or deliberate—by subjects or experimenters, might be possible. So the second hypothesis was that parapsychologists would resist accepting expert conjuring assistance in designing proper control procedures and, as a result, would

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James Randi is well known to our readers. An internationally renowned magician, he as been actively investigating paranormal claims for the past thirty-five years.

Dana Fineman, DISCOVER Magazine, © 1983 Time Inc.

Magicians Shaw and Edwards with Randi after their hoax was revealed.

fail to detect various kinds of simple magic tricks.

U.K. parapsychologist Trevor Finch had even directly suggested that the skeptics try to introduce a conjuror into a lab disguised as a psychic. Certainly my plan seemed to be in accordance with the expressed needs of the parapsychological community.

The director of the McDonnell lab was physics professor Peter R. Phillips, who had a decade of interest in parapsychology behind him. He had declared in the press that the lab intended to investigate psychokinetic metal-bending (PKMB) by children. Accordingly, I asked two young conjurors who had been in touch with me by mail, and had expressed an interest in my work as a skeptic, to write the McDonnell lab claiming psychic powers. Our experiment was to be code-named "Project Alpha."

We learned that the lab had considered some 300 applicants who contacted them in response to notices in the media. Both my colleagues, Steve Shaw, an English immigrant hospital employee in Washington, Pennsylvania, and part-time magician/mentalist, and Michael Edwards, a student in Marion, Iowa, and well-known there as a magician, were the only McDonnell lab subjects chosen from that rather large group of applicants. They were 18 and 17 years old, respectively, when they began the project.

We had established well in advance of the beginning of Project Alpha that at a suitable date we would reveal the deception. Also, the subjects agreed that, if they were ever asked directly by an experimenter if they were using tricks, they would immediately answer, "Yes, and we were sent here by James Randi." They would then answer any and all questions concerning their involvement.

Even before the boys were tested at the lab, I sent Phillips a list of eleven "caveats" concerning tests done with human subjects. For example, I warned him not to allow the subjects to run the experiment by changing the protocol. Similarly, I suggested that capricious demands by subjects might well be the means of introducing conditions that would permit subterfuge. He was warned that reports of conditions should be very precise, assuming nothing. Above all, I urged that a conjuror be present. To that end, I offered to attend the McDonnell lab tests at my own expense, without any requirement that I be credited with any participation, or even attendance, in subsequent reports.

From the very beginning, the researchers ignored the rules I had suggested. As in other investigations, the "gifted subjects" took over running the experiments. They threw minor tantrums (inspired by similar events reported to have taken place at the Stanford Research Institute when Uri Geller was examined there in the 1970s) whenever conditions were not to their liking.

Though I had specifically warned Phillips against allowing more than one test object (a spoon or key, for example) to be placed before a subject during tests, the lab table was habitually littered with objects. The specimens were not permanently marked, but instead bore paper tags attached with string loops. Edwards and Shaw found it easy to switch tags after the objects had been accurately measured, thus producing the illusion that an object handled in the most casual fashion had undergone deformation.

During one type of telepathy test, a subject would be given a sealed envelope containing a picture drawn from a target pool. Left alone with the envelope, the subject would subsequently surrender the envelope to an experimenter, who would examine it for signs of tampering. The subject would then announce his selection from the target pool. This series of tests was quite successful—though not overly so, because the boys realized that 100 percent might be suggestive of trickery. They purposely minimized their success. The method was easy. Since the envelope was "sealed" only with a few staples, they removed them, peeked, then replaced the staples through the original holes! In one case, Michael lost two staples, and to cover this he opted to open the envelope himself upon confronting the experimenter. The breach of protocol was accepted. The subjects had been allowed to shape the experiment.

In other ESP tests, significant results were obtained only when one of the subjects was aware of the target drawing and was allowed to watch

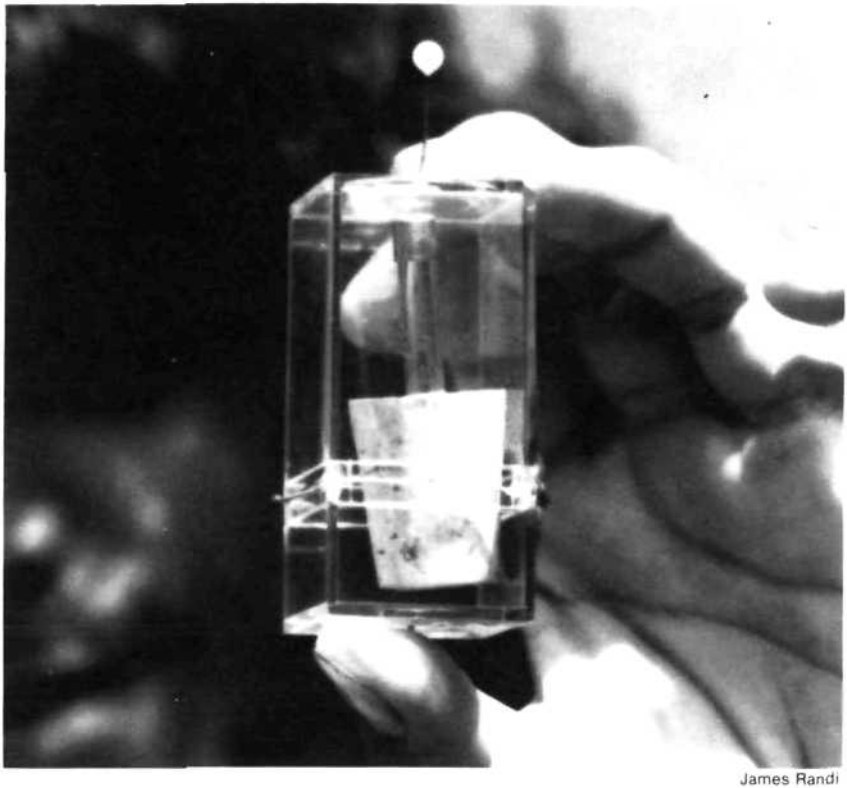
a TV monitor while the other tried to duplicate the drawing. The laboratory investigators decided, in their official report on the tests, that communication between the two by any means other than telepathy had been ruled out, since "Though it might seem suspicious that the most significant scores were obtained under just that condition which might have permitted collusion . . . we feel that any hypothesis of normal communication is very unlikely; even the best of our hits are not consistent with verbal cueing, but rather exhibit consistent resemblances of form without any semantic relation."

What the experimenters could have been told, if they had been willing to listen, was that the best of conjurors' "mind-reading" tricks are accomplished by a "hot-and-cold" system of communication having nothing to do with actual verbalization. Results obtained therefore appear much more striking in nature, and seem to be what might have been achieved as a result of "telepathic" transference. No amount of acting can simulate the actual difficulty experienced by the operators of such a system.

Though no communication took place during these tests, the lack of "consistent" hits referred to in the quote above would have provided just the required conditions for acceptance, had the experiment been successful. As it was, another common conjuror's ploy was utilized, giving an edge to the results that caused some excitement among the scientists. That "edge" would be eliminated, however, by proper double-blind evaluation of the data.

(A similar semblance of reality is accomplished by any truly competent "blindfold" performer who has learned the prime directive of that type of act. I recall Margaret Foos, who never did learn that subtlety. She was a "psychic" child who convinced TV host Merv Griffin and his audiences that she could see while her eyes were heavily bandaged. She appeared rather less than convincing as she walked briskly and confidently about the audience, simply because it was evident she really could see even while bandaged. Her act would have been improved immensely if she had really kept her eyes shut, thus genuinely stumbling about until she needed to peek.)

One rather naive experiment, conducted with Steve Shaw, involved a small slab of clear acrylic plastic in which a shallow groove had been cut. Into this groove was placed a thin (about 1/16") metal rod a few inches long that fit loosely, flush with the surface. It was believed, and so stated, that it was not possible to remove the rod from the groove by hand without either overturning the slab or using a tool of some sort. Steve was asked to stroke the metal with his finger and cause it to bend. He quickly discovered that the rod tilted up and out of the groove when he pressed down upon one end, the flesh of his finger having squeezed into the groove. He simply removed the rod unnoticed, bent it slightly, and re-inserted it into the groove, lying it on its side, since the groove was



James Randi

This fuse, sealed in a box by the laboratory scientists, was blown by the magicians by inserting pins through to the ends of the fuse and connecting it to a car battery.

wide enough to accommodate the bend. Then he stroked and rotated the rod 90 degrees to make it appear to bend up and out of the groove. The feat was deemed impossible by trickery.

In another run of experiments, involving an electronic setup, the boys were asked to shorten the capacity of tubular electric fuses. A current would be passed through a fuse and gradually increased until the fuse blew out, and that value would be recorded. They obtained excellent results in this test, seeming to cause premature rupture of the fuses through mental influence. The reason for their success was simply that they were allowed to handle the fuses freely. They were able to re-insert the same blown fuse repeatedly! The circuit had been designed so that even if a fuse were "open"—already blown—the instruments did not reveal the open circuit until the current was somewhat advanced. Thus it seemed that the fuse had blown quite prematurely. Also, the boys found that by pressing down upon one end of the fuse in its holder, or merely by touching it briefly while passing a hand over it, the instruments recorded unusual results that were interpreted by the experimenters as marvelous

psi effects.

Steve suggested that he might be able to affect a video camera and, while seated before one, staring into the lens, he gestured mysteriously over the instrument. The picture twice suddenly "bloomed" brightly, the image swelling and subsiding. This was recorded and subsequently shown in the official McDonnell lab film. It seemed to the researchers that this event was not possible by any but paranormal means; yet Shaw had simply reached forward and turned the "target" control on the side of the camera—twice—unseen by the lab personnel.

Steve, Michael, and I were in frequent communication by telephone and were thus able to plan what should be done to successfully get around the incomplete security measures that had been imposed on them.

The boys were also given small, transparent, sealed plastic boxes to take home with them, containing various objects they were asked to affect paranormally. The sealing was done by drilling small holes into the box and lid, passing fine wire through the holes so as to secure the lid, and sealing the joining of the wire loop with sealing-wax impressed with a symbol. The subjects found no difficulty in popping off the seal, opening the box, "affecting" the contents, and replacing the seal. In some cases they would re-melt the seal slightly to restore it. All three of us were astonished that the impression was formed by means of a standard 39-cent stationery-store seal bearing either an anchor or a bird symbol. For less than a dollar, we were able to defeat the security of a half-million-dollar project!

One box had a cork cemented into it and a fuse inserted into the cork, leaving one end in sight but the whole thing sealed inside. Rather than fuss with the wax seal, I defeated this one merely by sticking a heated pin through the mold-release mark on the bottom of the box and up through the cork until it contacted the concealed bottom of the fuse stuck in the cork. Another pin was inserted through one of the holes in the side and contacted the exposed fuse tip. A brief visit to my car battery, and in a flash the fuse was blown.

As in all cases where we had physically interfered with or altered the equipment, we purposely left positive traces of tampering. Although the hole in the mold-mark was resealed by pressing a hot pinhead against it, when the plastic box was viewed from the side the hole was easily detectable. But it was never noticed.

However, this interesting deception fell through for a strange reason. When the lab failed to express enthusiasm over the blown fuse, the boys asked why. They were told that, in the opinion of the scientists, a centrifuge could have been used to break the fuse wire! Now the small mass of the threadlike fuse wire made it unlikely to be broken by centrifugal force, and such a break would be very clearly distinguishable from a melted one such as the sample produced by our trickery—or one fused by mental power. So, although for once the scientists were right, it was

James Randi

James Randi

Above: Steve Shaw as seen on the lab's videotape bending a piece of coat-hanger wire. A split screen was used, yet his trick went undetected.

Left: Physicist Peter Phillips, director of the McDonnell Laboratory for Psychical Research.

for the wrong reason.

The McDonnell lab videotape showed the subjects causing a lightweight paper rotor perched atop a needle-point to turn—in either direction, at their will—while mounted inside what was called a "bell jar." The terminology was misleading indeed. A bell jar is a piece of laboratory equipment designed to be hermetically sealed to a base-plate, and usually capable of being evacuated of air. The actual item used was a glass dome, the cover of a cheap clock, placed upon a wooden base with a slot to receive the edge of the dome. A further seal was made by a layer of aluminum foil that settled inside the recess.

The boys demonstrated that a static-charged comb was not able to cause a deflection of the rotor because of a special anti-static coating sprayed upon the dome. But when they replaced the dome, it was an easy matter to drop a small ball of aluminum foil into the slot, causing the dome to tilt slightly and provide a gap. By simply blowing surreptitiously at the base of the dome, the boys could cause air to circulate within and thus turn the balanced rotor. Changing body position and blowing from a different angle changed the direction of the air movement, and thus the direction of rotor movement. Since the small ball of foil matched the layer of foil, it was invisible and could easily be removed after the experiment—especially since the boys were allowed to handle everything freely.

One device developed at the laboratory for testing the Alpha subjects consisted of an overturned aquarium bolted and padlocked to a stout table. Objects would be put inside and left overnight. Since the locks on the doors were of excellent quality, and Phillips wore the padlock and door keys around his neck, security was thought to be absolute. It was not. Edwards and Shaw simply left a window unlocked, and returned to the premises at night. There were several ways to open the sealed aquarium, and they were free to do anything they pleased with the contents,

which were discovered in the morning by lab personnel to have been bent, twisted, broken, and moved about by mysterious paranormal forces.

A part of the aquarium test used a shallow box in which dry coffee-grounds were spread in a thin layer. Small cubes and other objects were placed therein, and were found to have spelled out strange cabalistic symbols when examined in the morning. This evoked much wonder among the investigators.

Later in the progress of Project Alpha, the amateur magician who originated the sealed-aquarium system, and who even now proclaims himself incapable of being flimflammed in his specialty of designing untamperable sealed containers, tried to improve upon the aquarium by providing inviolable bottles. As we shall see, he failed even more spectacularly.

There is no question that the lab personnel believed that Mike and Steve actually were psychic. They did. It was this belief that made the deception exceedingly easy, and it was clear that, had the two entered the arena as conjurors, they could never have gotten away with all they did. The lab personnel further crippled themselves by referring to the kids as "gifted psychic subjects," even inventing the term *psychokinete* to apply to them. Simple tricks, performed under very informal conditions of control, were declared PK events, and careless descriptions of circumstances surrounding performances were written up. These factors certainly added to the sympathetic atmosphere in which the subjects were operating.

Another factor that led researchers down the garden path was their total, unquestioning acceptance of, and belief in, the work of their fellows in the field. Even the most doubtful results, seriously questioned and in some cases thoroughly denounced by colleagues, were embraced by the investigators when it matched their needs. It is apparent that many parapsychological investigators never do a house-cleaning to get rid of the obvious trash, and the clutter that results makes it impossible to obtain a clear picture of just what their problem is.

Any minor remark or claim made by the subjects that seemed to fit an outside researcher's notion of reality or fulfilled some expectation was further evidence to the laboratory investigators that they were dealing with the real thing. For example, Steve and Mike complained about electronic equipment putting out "bad vibes," not only to satisfy this established bit of mythology, but also to minimize proper video observation. Also, they were careful to mention that in early childhood both had experienced electric shocks, after which they had become aware of their psychic powers. Though not usable as strict evidence, acceptance of these tidbits further deepened the quicksand into which the researchers continued to sink.

All through the three-year period that Steve and Mike were at the McDonnell lab, I continued to write Professor Phillips offering to attend experimental sessions as a consultant. Phillips seemed quite confident

that he could not be deceived, however, and did not accept my offer.

Then, in July of 1981, I "leaked" broad hints of Project Alpha at a magicians' convention in Pittsburgh. Eleven days later, I heard that some rumors had reached the McDonnell lab. This had been done in an attempt to alert the parapsychologists. Instead, the rumors were reported to Steve and Mike at the lab as great jokes. They were not asked if there was any truth to them.

Just previous to this event, Phillips had for the first time actually written to me for assistance. He asked if I would be prepared to supply him with a videotape of fake PKMB being performed, along with a revelation of how it had been done. He intended to show it at the forthcoming August meeting of the Parapsychological Association in Syracuse. I immediately agreed to do so, and within a few days I had excerpted a number of performances from my videotape library in which I was shown bending and breaking keys and spoons as well as doing some convincing "ESP" tricks. I supplied two sound tracks, one the original and the other a running commentary describing in detail the method used. I threw in, for educational purposes, an episode with Uri Geller in which he is seen to use exactly the same method in a spoon-bending performance, and is caught on tape doing so.

I felt that rumors of Alpha would reach Phillips at about the time he had my videotape and that he would be able to examine both his evidence and mine in light of the possibility that the collusion rumor was true.

In return for my participation, I asked Phillips if I might have a copy of the McDonnell lab videotape of the Alpha subjects that had been prepared for showing along with my tape at the upcoming PA meeting. He agreed to do so; and, just days before the convention, I received his tape. I drew up a detailed analysis of the tricks shown there, pointing out that positively unmistakable evidence of deception was contained in their tape.

At the convention, Phillips showed my tape and his own. An active rumor began circulating that Phillips and I were working together to discredit the PA, and it was widely believed. It was no surprise that his announced findings were received by the parapsychologists with little enthusiasm – although some of them, Walter Uphoff and William Cox in particular, were ecstatic. Cox, never one to entertain any doubts, had written Phillips a month earlier objecting strenuously to his intention of showing the videotape I had prepared. He apparently felt that it would not be good to introduce any doubts whatsoever into the proceedings.

A formal report on the two subjects, prepared by the McDonnell lab and distributed at the convention, was hastily recalled, and modifiers ("apparently," "seemingly," and "ostensibly") were inserted at appropriate points in the text. It was reprinted and once again distributed. In somewhat a state of shock, Phillips was cornered by me after the workshop, and I insisted upon showing him and Mark Shafer, his principal

researcher, where the tape showed evidence of fraud. Visibly shaken, the two thanked me for my efforts, and I parted from them reasonably sure that they had been impressed enough to change their ways.

Upon my return from the convention, I contacted Edwards and Shaw, and informed them that Phillips was now very suspicious, and that Project Alpha was probably about to end. •

In Part II, to appear in the Fall 1983 SKEPTICAL INQUIRER, *the author will describe the involvement of several other well-known parapsychologists who were taken in the Alpha net and how they fought valliantly against a rational understanding of the trickery that Steve Shaw and Mike Edwards were using. The conjurors worked side by side with two "validated psychics" whose methods were transparent to them, and their exposure will be detailed. We will follow them to the U.K., where they easily bamboozle the press and psychic aficionados. We will also discuss the outcome, ramifications, and lessons of the Project Alpha experiment.* —ED.

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American Disingenuous: Goodman's 'American Genesis'— A New Chapter in 'Cult' Archaeology

Entering the 'twilight zone' of American archaeology

Kenneth L. Feder

Prepare to enter the world of anthropologist Jeffrey Goodman, Ph.D. We are about to examine his latest work, *American Genesis,* and are about to enter the "twilight zone" of psychic archaeology, bizarre interpretations, and misrepresentation of others' research.

"Scientist Stuns Anthropological World," read the headline of the *Chicago Tribune* article reprinted in my local newspaper, the *Hartford Courant,* on April 20, 1981. The piece concerned the "revolutionary" thesis proposed by Dr. Jeffrey Goodman that the crucible of human evolution was not located in Africa, as virtually all anthropologists and human paleontologists have claimed, but was, instead, in North America, specifically California. According to the article, Goodman went on to claim that human beings did not, as again virtually all archaeologists believe, enter the New World from the Old via the Bering land-bridge at a relatively recent geological date but, rather, appeared *first* in California at a very ancient date and populated the rest of the world from there. Thus all other human groups—Africans, Australians, Europeans, and Asians—can be traced to American Indian roots that were far more ancient than anyone had previously believed. According to the article, the scientific world was "stunned" by Goodman's hypotheses, and his ideas had "some anthropologists waving their shovels."

I must say that I was not "waving my shovel," nor was I the least bit stunned. I had run into Goodman before, albeit indirectly, when I was writing a highly critical, skeptical piece on "psychic archaeology" (Feder 1980). Goodman's previous book was, in fact, titled *Psychic Archaeology: Time Machine to the Past* (1977) (see Cole 1978b), and in it he dis-

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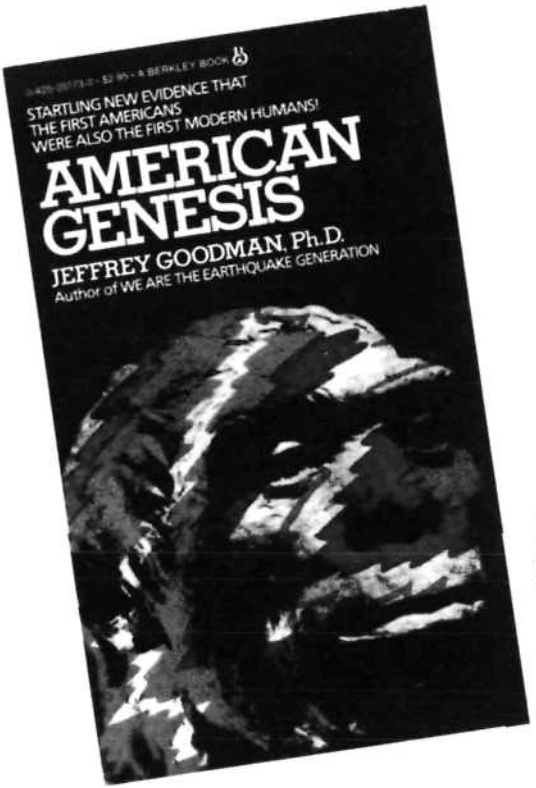


Goodman's book claims that the crucible of human evolution was in the western United States.

cussed the use of "psychically" derived information in finding and interpreting the Flagstaff site, a major piece of evidence also used in *American Genesis.**

In any event, having carefully examined his latest work, I am happy to report that Goodman has not let us down. It is a disingenuous fantasy that completely misrepresents the prehistory of the New and Old Worlds and implies that all those (particularly archaeologists) who disagree with

* The source of Goodman's Ph.D. is an interesting side issue. In *Psychic Archaeology* (p. 97), he mentions his master's degree in anthropology from the University of Arizona, one of the top schools in this field in the country. He further discusses his acceptance into their Ph.D. program, where he decided to "concentrate on developing the empirical practicality of psychic archaeology" (p. 98). On the cover of *American Genesis*, Goodman's name is followed by the title "Ph.D." I made what seemed to be the inevitable inference that one of the finest anthropology programs around had awarded a Ph.D. in psychic archaeology. Curious, and unable to find Goodman's dissertation in *Dissertation Abstracts*, I contacted the Anthropology Department at the University of Arizona. I was informed in no uncertain terms that they had *not* awarded Goodman a Ph.D., but that a large number of people have made that assumption based upon the information Goodman provides in his books. The University of Arizona Anthropology Department made it their business to track down the actual source of Goodman's doctoral degree—California Western University, a school not listed in the *Guide to Departments of Anthropology*, the official list of anthropology programs published by the American Anthropological Association.

him are being racist. This 200-page book is now in a second paperback printing, and demands professional response.

American Genesis makes the following claims:

1. An understanding of the American Indian has been hindered by racism and prejudice. As Goodman says (1981, p. 7), and as most would agree, "The American Indians have been one of the world's most misunderstood, maligned and persecuted races."

2. Indians were certainly in the New World at the very latest 12,000 years ago. Their presence is reflected by the remains of a culture known as "Paleo-Indian." These people, whose artifacts have been found throughout the United States, hunted the large game animals present in North America at the end of the latest period of glaciation.

3. There is a body of data indicating that Indians may have been present in the New World earlier than 12,000 years ago and possibly as long as 30,000 years ago.

Almost all researchers would support statements 1 and 2, and the majority of archaeologists agree with point 3. From here, however, virtually all archaeologists would part company with Goodman.

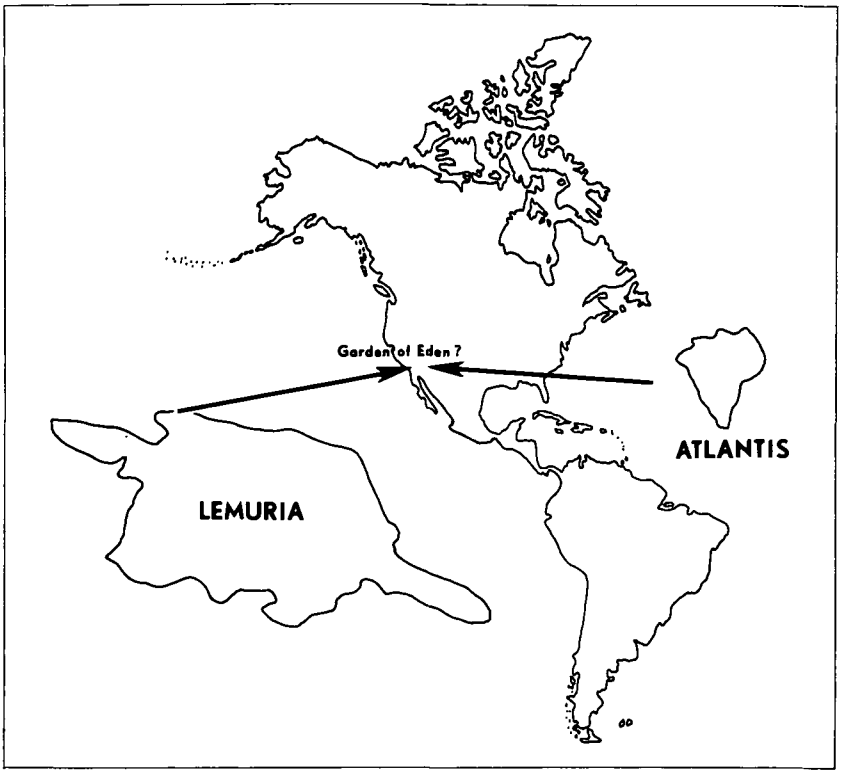
4. There is very good evidence that people were in the New World 70,000 years ago and perhaps as long as 500,000 years ago. (Only a very few professional prehistorians would agree here.)

5. Skeletal evidence indicates that more than 70,000 and possibly up to one-half million years ago, the people present in the New World were *fully modern* in appearance, predating the first appearance in the Old World of folks who look just like us by at least 35,000 and as much as 465,000 years.

6. These earliest humans lived in California—Goodman, in fact, characterizes California as a "Garden of Eden" (1981, p. 4)—and spread out to populate the rest of the world from this home base. Individual members of early California hunting bands explored as far west as France and returned home to tell people of their New (our Old) World.

7. There is abundant archaeological evidence to indicate that America, along with being the womb of physical evolution, was also the cradle of cultural innovation. Artifacts, including bifacial projectile points, bone tools, ceramics, basketry, and stone carvings, together with other data, indicate that most if not all of the great inventions and innovations of prehistory appeared first in the New World, often in contexts of twice the antiquity of the previously presumed oldest examples from the Old World.

Thus Goodman is attempting to turn prehistory on its head. The accumulated discoveries of researchers in the prehistory of the Old and New Worlds are seen as being almost completely invalid. A scenario of the slow evolution of humanity from a series of African, Asian, and European hominids is viewed as incorrect. The movement of humans into the New World from Asia only after attaining fully modern "sapien-



The Map Goodman Omits in American Genesis: In *American Genesis*, Goodman supplies a map of the world replete with arrows indicating hypothetical migration routes of the original human beings outward from his "Paleo-Indian California Garden" (like in Eden). However, he provides no map and no arrows indicating where these "Paleo-Indians" came from. The map above remedies this by indicating the true source of American Indian populations according to Goodman's previous work—i.e., the so-called lost continents of Atlantis and Lemuria!

hood" in the Old World is to be similarly discarded. In other words, Goodman would have us discard just about all of our constructs of human physical and cultural evolution.

Could archaeologists be so wrong? Can we have been so completely mistaken in our interpretations of the prehistoric record? Has Goodman provided a bold new synthesis for archaeology that will inevitably lead to a revolution in the science of the past?

To answer these questions, we must examine some of Goodman's specific claims. We will begin, as Goodman does, with the Bering land-bridge. Archaeologists know that the ancestors of American Indians made their way into the New World via a land connection with the Old World that was made available during periods of glaciation. Goodman rejects this.

He claims that the land bridge was not rich in animal life and therefore conditions would not have been conducive to human migration.

Goodman claims that the land bridge had terrible weather and was so harsh an environment that even as hardy a creature as the woolly rhinoceros did not make it across. So, because the woolly rhino did not make it, nothing or nobody could have. The fact that almost all of Canadian fauna is of Asiatic origin is not dealt with by Goodman. He also neglects to mention that, as hardy as the woolly rhino may have been, all evidence indicates that it was adapted to forests and forest steppe areas, which were not present on the land bridge. In fact, remains of the woolly rhino are quite rare in northeastern Asia for this reason, so its lack in the New World is not surprising (Flerow 1967). If the land bridge could not have supported animal populations, someone should tell this to the bison, snow sheep, muskox, moose, elk, brown bear, ermine, weasel, wolverine, wolf, red fox, lynx, arctic hare, lemmings, voles, and so on, who all made the trip from Asia to the New World on that very land-bridge.

In terms of archaeological data related to the Bering land-bridge route Goodman (1981, p. 42) states, for example: "Dr. K. R. Fladmark of Simon Fraser University notes that the known distribution of early archaeological sites in the New World *does not* match that expected from an initial population from the Bering route." [Emphasis added.]

This seems very clearly to imply that Fladmark, a noted Canadian archaeologist, rejects a land-bridge migration route and thus adds support to Goodman's hypothesis. In fact, this is a gross misrepresentation of Fladmark's research. To quote from Fladmark's article (1979, p. 55) referenced by Goodman: "The intent of this paper is to examine and compare the feasibility of late Pleistocene coastal and interior routes for man entering southern North America *from* Beringia." [Emphasis added.]

Fladmark is obviously not questioning the feasibility of the land-bridge route; he is merely questioning where people went after they used that route. Goodman admits this later on, but his initial misrepresentation is likely to make more of an impression on the reader than his later clarification.

Goodman provides further "damning" evidence against the Bering land-bridge route. Referring to American Indian mythology regarding their own origins, Goodman (p. 20) states: "Conspicuously missing in all the known myths are any stories that bear the slightest resemblance to the notion of a Bering route; none seem to describe an arduous journey from Asia across the ice and snow of the North." Expecting Indians to "remember" the Bering land-bridge through myth is like expecting a modern Parisian to remember painting Pleistocene animals on cave walls. This argument is merely ludicrous.

Finally, Goodman claims that geological and meteorological evidence indicates that, even if people could have crossed the land bridge, ice and bad weather would have blocked their way to the south. But this notion of an insurmountable barrier of ice blocking the migration of humans south from Alaska into the continental United States is not

Excavation at Calico Hills, California: The results of archaeological excavation at Calico are, to say the least, ambiguous. The main question centers on whether the pieces of chipped stone recovered to date represent the natural end-products of rock movement within an ancient alluvial fan or are the result of intelligent manufacture. However, even in the most extreme scenario, the Calico Hills site would simply represent a very early migration of an extinct hominid (*Homo erectus*?) into the New World some 250,000 years ago and would do nothing to bolster Goodman's claim that humanity *evolved* there.

supported by available evidence.

The funniest aspect of Goodman's argument here is that three chapters later he proposes the idea that American Indians migrated and, in fact, made regular round-trip journeys to Asia, and ultimately to Europe, via the Bering land-bridge (Goodman 1981, pp. 120–21).

Next, Goodman discusses particular sites in the New World in support of his hypothesis. He lists a series of sites, all purported to be much older than the oldest accepted Paleo-Indian sites (1981, p. 69). It should be noted that none of these sites, though very controversial, relate in any way to Goodman's more extreme claims of human physical evolution in California.

For example, Goodman refers to the Calico Hills site in California as one supported by the late Louis Leakey and estimated to be 100,000 to 500,000 years old. The "site" has been extremely controversial since its discovery, and whether the artifacts are the result of human or geological activity is still uncertain (see Haynes 1973). However, even if Calico turns out to be a valid site, it does not support Goodman's hypothesis that modern humanity *evolved* there, though Goodman (1981, p. 98) consistently implies that this is indeed what Louis Leakey thought. In an

interview (Yates 1981), Goodman said: "Dr. Leakey was convinced that modern man originated here in Southern California." Leakey of course never said this in print; and, if he did believe it, we may ask what on earth he, Mary, and their son Richard were doing excavating in Africa when it was "all happening" in California?

Goodman claims that skeletal evidence, primarily from California, shows that not only are there very ancient sites in the New World but that fully modern *Homo sapiens sapiens* were present here at least 70,000 years ago. This is astounding, because the earliest evidence of physically modern humans in the Old World, where everyone else thinks they evolved, points to only about 35,000 to 40,000 years ago. Goodman bases his claim on five prehistoric skeletons from California, all of which have been dated by the amino acid racemization dating technique to between 44,000 and 70,000 B.P. (Before Present). The skulls of these skeletons are completely modern in appearance and, in fact, look just like those of contemporary California Indians. If the dates are valid, this would suggest tremendous genetic stability, to say the least. Recent work with the racemization technique, however, indicates that temperature fluctuations, the rate of soil deposition, and even the kinds of plants growing in the soil near the skeletal material can seriously affect the dates. Two of the skeletons so crucial to Goodman's argument were recently dated with a uranium series technique and turned out to be between 8,000 and 11,000 years old (Bischoff and Rosenbauer 1981). Thus Goodman's most serious claim is based only on very questionable dates on a handful of skeletons. Should we ignore the entire fossil hominid record of the Old World because of five very questionable dates on these California materials?

Goodman goes on to claim that these early New World humans invented most of what are now considered to be the hallmarks of humanity and civilization. Only later, the argument goes, did they bring these things to the rest of the world. Goodman (1981, p. 178) states: "Our debt to the Paleo-Indians could include the first domestication of plants, the first domestication of animals, the first practice of freeze-drying food, pottery, the calendar, astronomy, and the applied understanding of the physics behind electro-magnetics and Einstein's gravity waves." Where they found the time to make spears and kill woolly mammoths while doing all of this, we are not told. Those who are familiar with the paranormal literature may notice a similarity in the extent of the claimed precocity of American Indian culture and that usually ascribed to the residents of the "lost continent" of Atlantis. This similarity is not coincidental, as we shall see.

Can Goodman trace the diffusion of these revolutionary ideas from California to the rest of the world? Is there any evidence to back up his claims? Since stone tools are among the most common kinds of artifacts found by archaeologists, we can start here. Can we trace the movement

Stone Tool Technology: The two spearpoints on the left represent artifacts of the European Late Paleolithic. The two on the right (plastic casts) are points from the North American Paleo-Indian period. Goodman says in no uncertain terms that the two industries represented are "exactly" alike (p. 131). Even a brief glance at the points presented above shows this claim to be false.

of stone-tool types from their invention in the New World into the Old World during prehistory, thus supporting Goodman's concept of migration from east to west?

Goodman claims that the leaf-shaped Solutrean spearpoints of Ice Age Europe were based on the fluted or channeled point of the New World. Thus Paleo-Indians traveled from California to Europe, bringing with them their distinctive toolkit and introducing bifacial projectile points into the Old World. This ignores a couple of minor items, such as the fact that the most distinctive aspect of fluted points—their fluting—is entirely absent from the Old World material. There is also the problem of some of the European points being about 5,000 years *older* than the earliest American ones. Goodman disagrees here and, basing his hypothesis on exactly one point from one site, claims that in the New World fluting is not 12,000 years old, but 38,000 years old. The site is in Lewisville, Texas. There, in a purported hearth whose C-14 date is 38,000 B.P., a fluted point was recovered. The date perturbed archaeologists when the

site was excavated in the 1950s, and people have tried to explain it in terms of a provenience problem or even fraud. Clearly the site is out of line with the hundreds of other dates available for the fluted-point technology in the New World. What does Goodman say about all this?

Goodman says the fluted point from Lewisville is obsidian. It is not. Goodman says (1981, p. 74) subsequent finds made by Dennis Stanford of the Smithsonian Institution resulted in "stone tools and debris which support the original evidence." According to Stanford (1981, p. 91), *no* subsequent stone tools were found at Lewisville by him or anyone else. Stanford, who has built a career on his quest for finding pre-Paleo sites and who has excavated at Lewisville, states that all of the hearth material recovered at the site used in radiocarbon dating was contaminated with local, naturally occurring lignitic coal and that the dates could be off by as much as 27,500 years (Stanford 1981, p. 91). Lewisville may be a genuine Paleo site after all—but it is probably around 10,500 years old, an expectable date. It would be hasty indeed to rewrite world prehistory on the basis of these data.

According to Goodman, basketry is also older in the New World than in the Old. This hypothesis is based on evidence from only one site. Goodman (1981, p. 85), describing the archaeological material recovered from Meadowcroft Rockshelter in southwestern Pennsylvania, writes: "And from a slightly deeper level came a radiocarbon date of 20,000 years ago for what is believed to be a basketry fragment." Later on (p. 123), when discussing the source of rope wicks used in oil lamps in Europe during the Upper Paleolithic, he states: "The rope wick would take advantage of the same technical skill used in the making of baskets which appeared at Meadowcroft in Pennsylvania over 20,000 years ago."

So, what was "believed to be a basketry fragment" just 38 pages earlier, now becomes definite "baskets." In fact, the excavators of Meadowcroft have been very careful to label the *single* artifact in question a "carbonized fragment of cut bark-like material/possibly basketry fragment" (Adovasio et al. 1979), which is dated to 17,650 B.P. ± 2,400 years. In other words, a "fragment of cut bark-like material" with a widely ranging carbon date becomes definite 20,000-year-old baskets in the New World for Goodman.

This brings us to a discussion of the Flagstaff site. This site, excavated by Goodman, is a central piece of evidence in his argument. Inexplicably, we are not told in *American Genesis* that the supposed site was "discovered" by psychic means and similarly interpreted. Goodman claims an age of between 100,000 and 170,000 years for this Arizona site. Somehow, based on a number of extremely questionable artifacts, Goodman wishes us to believe that his Flagstaff site shows that the Hopi Indian creation-myth is literally true and should supplant the theory of evolution. Goodman's *pièce de résistance,* however, is his "Flagstaff stone" (1981, p. 173): "a flat stone, a piece of hard volcanic ash approxi-

mately four inches by six inches in size which had a number of straight lines on both of its sides. It looked like an engraving, it had to be an engraving, . . . it was as if a Paleo-Indian had left his irrefutable signature here for us." Goodman (p. 173) goes on to claim, "I believe that here in one artifact alone there is evidence of fully modern man's earlier presence and earlier sophistication in the New World than in the Old World." Thus we have, just outside of Flagstaff, Arizona, a prototype of the cave art of the European Upper Paleolithic at least three and one-half times the age!

Goodman assures us that experts in Paleolithic art have analyzed the Flagstaff stone and were impressed. Alexander Marshack of Harvard's Peabody Museum examined the stone and supposedly said that the markings looked intentional and were quite similar to those from Cro-Magnon sites in Europe (Goodman 1981, p. 174). However, as Goodman states (p. 175): "The highly weathered and now very soft surface of the stone was apparently damaged in cleaning and thus many of the lines had been stripped of bits of information which would have let Marshack make a more conclusive determination. Marshack said that if we could resolve these problems then the 'Flagstaff stone' would be one of the most important artifacts ever found in the entire world."

Goodman neglects to tell us *exactly* what Marshack wrote to him after he examined the stone. In Dennis Stanford's review (1981, p. 92) of *American Genesis,* we see *exactly* what Marshack told Goodman. Marshack said that he believed the grooves on the rock were intentional, however, "Every groove without exception had been deepened and straightened, reworked after it was dug out of the ground . . . thus the stone cannot be used as evidence that early man engraved it."

This litany of incorrect data, misrepresentation of others' research or statements, and the apparent mishandling of a possibly important artifact barely scratches the surface of Goodman's own particular brand of pseudoscience. I have not mentioned his claim of having evidence of the Paleo-Indian domestication of corn 80,000 years ago (1981, p. 179), based on a few questionable pollen grains from Mexico, and the domestication of horses inferred from representations of pregnant mares in the cave paintings of Europe (1981, p. 180). How about Paleo-Indians inventing aspirin, insulin, and birth control pills more than 10,000 years ago? (Goodman 1981, pp. 178–79)

What is Goodman leading up to? If people did not evolve in the Old World, and if modern humans arrived fully developed in California with an astoundingly sophisticated technology 500,000 years ago, where, pray tell, did they come from? Goodman never really says, though he poses a significant question (1981, p. 91): "Was modern man's world debut the result of slow development or the result of a quantum leap inspired from *some outside source*?" (Emphasis added.)

What could be this "outside source"? Goodman doesn't tell us in

Archaeological Absurdities: Lost Continents? Ancient astronauts? Psychic archaeologists? Whatever suits your fancy can be found in the library of absurdist archaeology. Most professionals are disinclined to respond to such nonsense and thereby leave the field of popular interest in our discipline to the charlatans and pseudoscientists. Unfortunately, lack of response is probably viewed by the public as acquiescence.

American Genesis, just as he does not tell us that the Flagstaff site was supposedly found through psychic powers. However, in Goodman's earlier book, *Psychic Archaeology: Time Machine to the Past* (1977), we find that the psychic who found the Flagstaff site, and who was allegedly accurate in his predictions of what was to be found there, provided the answer to the ultimate origin of American Indians: They came to the New World 500,000 years ago from the now lost continents of Atlantis and Lemuria (Goodman 1977, p. 88). The sites in the New World that are so much older than those of the Old World represent outposts or colonies from Atlantis. Some of the great inventions Goodman ascribes to American Indians in *American Genesis* are listed by his psychic as coming directly from Atlantis (Goodman 1977, p. 92).

Goodman has merely written a new chapter in the saga of what Cole (1980) calls "cult archaeology," in which the field is treated not as a scientific enterprise of discovery and explanation but as a foundation for pseudoscientific belief. Within the "field" of cult archaeology we may include, as Cole does, the ancient-astronaut "theory," the search for Noah's Ark, Atlantisology, inscription mania, psychic archaeology and, now, "American Genesis."

Goodman's arguments depend on psychic archaeology, rejection of human evolution, abandonment of well-supported cultural chronologies,

ignoring genetics and epidemiology, and the existence of the lost continent of Atlantis. To call this credulity is an understatement.

So we have come full circle; a "rebel" scholar who writes a book to present a new, revolutionary hypothesis concerning the origins of the American Indians is simply revising an explanation first suggested by the Spanish author Lopez de Gomara in 1522 (Huddleston 1967, p. 24). It is not surprising that Goodman does not desire to spread this around.

There is a final irony here. Goodman presents himself as a great defender of the significance of Indian prehistory. *Only he* fully appreciates just how impressive the accomplishments of American Indians really were (1981, p. 197): "Today, in the teeth of the facts, many archaeologists still believe that every prehistoric invention of consequence, was made in the Old World instead of the New." So *we* all put down the accomplishments of American Indians, but Goodman is a beacon of knowledge and understanding.

Goodman should read the works of the originator of the Atlantis–Indian Connection, Lopez de Gomara, who characterized Indians as "stupid, wild, insensate asses" who went around naked, were liars, ingrates, and cannibals, and engaged in public sexual intercourse with animals (Huddleston 1967, p. 24).

Goodman does no favor to American Indians, whose genuine past shows them to be the equal of any group of people in the world, by concocting an outrageous and disingenuous fantasy. Now that Goodman has set all of us archaeologists straight, he will be going on to solve the problems of evolution in his next book, *The Genesis Mystery: The Sudden Appearance of Modern Man.* So, to return to the very beginning of this paper: just as we did with television's "Twilight Zone," we can tune in again for another excursion into fantasy.

Acknowledgments

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I also thank Mrs. Harriet B. Martin, secretary to the Department of Anthropology at the University of Arizona, for her help in finding out where Dr. Goodman received his Ph.D.

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Battling Back on the Airwaves

How to use the radio talk-shows to fight bogus science

David B. Slavsky

For many of us, watching television and listening to the radio have become painful experiences. In what might be one of the most brutal ironies of our day, broadcasting—the synthesis of some of the most elegant scientific and technological advances of the last century—has become a major stomping ground for the proponents of pseudoscience. Local television newscasts breathlessly keep us informed of the latest psychic detective investigation, and radio programs—especially those on "news-talk" stations—allow us to consult a staggering array of new-age prophets and healers. Many scientifically oriented people listen to these shows with resignation, mumbling to themselves about the new levels of media madness and wondering what new assaults on rationality may be coming next over the airwaves. I would like to submit that we need not accept the situation as it is; I would like to suggest that we can battle back.

My first experience combating pseudoscience on radio occurred quite by accident while I was a graduate student at Harvard. One of the Boston radio stations I frequently listened to had a disturbing propensity for scheduling astrologers, Bermuda Triangle experts, and Atlantis scholars on their talk-shows. One day, having had quite enough, I called the station to note that reputable scientists uniformly disputed the views of their guests and to suggest that they would be doing their audience a service by allowing a scientist on the air to present the scientific side. They invited me; but, although I do not believe I did too much damage to

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the progress of science, there were no reports of repentent UFOlogists and psychics tossing their books and paraphernalia into Boston Harbor.

Since then, I have made many more appearances on radio and television, culminating in my hosting a weekly call-in show on pseudoscience over KLBJ-Radio, a commercial AM station in Austin, Texas. I believe that these experiences have taught me a great deal about how we may be able to fight the pseudoscientists on what has been their turf and will discuss some of the ways I feel we can be most effective. First, I should state that I am an astronomer and feel my specific expertise is in such topics as UFOs, astrology, and Velikovsky, and that many of my examples will be drawn from the physical sciences. I do not mean to slight other disciplines; astronomy and physics are what I know best. Also, although I have participated in both radio and television programs, I am much more familiar with radio, and my remarks are probably much more relevant to that medium.

The first objective is to gain access to radio and television stations; this is really not as difficult as it sounds. I have usually found stations receptive to considered criticisms of their programming and think that my first experience with the Boston station is actually fairly typical. If one of your stations does present psychics, call and write the station manager and the program director. Point out to them that the scientific community disputes claims of the paranormal, and volunteer to go on the air to present the scientific side. Remember, here we are aided by the media's desire for controversy: not only are pseudoscientists fairly popular guests, but debunking them stirs all sorts of reactions. Further, let the station know that you are available to provide local expertise whenever there is a major news story in your specialty. It has been my experience that news directors are always glad to know of sources of advice and interviews. In fact, I suspect that getting on the airwaves poses fewer problems than what to do once you're there.

The most important point to remember is that you will not be dealing with scientists, and this principle will manifest itself in many ways. One of the most common complaints scientists receive from nonscientists is that they appear far too authoritarian, that they are far too quick to say that something is impossible or is flat wrong. We should remember that nonscientists do not speak the language of scientists. Not only does this mean that scientists use the jargon of a particular field; it also means they use a different syntax. Scientists, when speaking with each other, will often say that a statement or equation is incorrect, and then proceed to give the reason. I have found this to be a poor way to communicate with nonscientists. When they hear a scientist say: "That's wrong, because . . ." they stop listening at "That's wrong" and, by the time you've finished your explanation, they've branded you another closed-minded scientist. I think it is much better to start with the explanation, and end with the conclusion. As a specific (and real) example, I am often asked if

I believe in UFOs, to which I typically respond:

> I'd really like UFOs to exist. As a kid, I watched every grade B sci-fi flick, and I can tell a Mysterian from Gort in a second. As an astronomer, I think the discovery of UFOs would be marvelously exciting, and there are some questions I would want to ask the extraterrestrials. But, as a physical scientist, I need to see some sort, any sort, of physical evidence before I can believe we've been visited by intelligent life from elsewhere. Whenever I've looked into what seemed a really promising case, there's been no evidence that could stand up to scientific inquiry. When you consider how many sightings have been made, and how many claims have been presented, the fact there is still no solid evidence makes me awfully skeptical about the existence of UFOs. If anyone has evidence, I'd love to see it; so far, no one has been able to show me any.

However, it may seem awfully difficult to avoid jargon when the pseudoscientists seem to revel in tossing about technical words and phrases. I think that, if we can anticipate their points in advance, we can answer them with solid, nontechnical arguments. Recently, many of us have had to deal with the creation-science issue. In particular, I've been asked frequently to comment upon creationists' using the Second Law of Thermodynamics to debunk evolution. (Briefly, the argument is that the Second Law states that all systems go to disorder, whereas evolution says that systems become more ordered. Ergo, discard evolution.) I submit

this answer as one some of you might like to consider:

> According to the creationists' version of the Second Law, systems go from order to disorder. Let's do an experiment: Take ice from your freezer and put it outside; the water melts—order to disorder. Fine. Now, let's put the water back in the freezer—ice. Disorder to order. Now, either your refrigerator has violated the Second Law of Thermodynamics and the physics police are going to come and arrest you, or they haven't told you everything about the Second Law. In fact, there's lots they haven't told you about it. The Second Law, when considered in all its detail, never excludes the possibility of a *local* decrease in disorder (entropy) if you can put energy into a system. Recently, Ilya Prigogine of the University of Texas (this had lots of local appeal in Austin) won a Nobel Prize in physics for showing how something called "nonequilibrium thermodynamics" fits in perfectly with the ability of chemical systems to form large and complex structures. Rather than a refutation of evolution, the Second Law, when it is looked at in its entirety, is a beautiful confirmation of our ideas of evolution. (At this point, I like to mention that lots of creationists' arguments leave out important points when it serves their interests.)

We should stop always being on the defensive and always counterpunching. It seems that we spend all our time explaining why we're not part of some international conspiracy of scientists, or why radiometric dating is not thoroughly ridiculous. The example above contains elements of how I think we might be able to take the offensive and promote the scientific process in addition to showing the fallacies of the pseudoscientists. Sometimes an appeal to the obvious is the best technique to use. I note that psychics are always asked the wrong question. They're asked, "If you're so psychic, how come you're not rich?" This gives them a chance to explain that their gift is a sacred one and that they can't use it for selfish purposes. I accept that. I just want to know why they don't work for the United Nations and predict when and where the next great earthquake will occur so we can have all the emergency agencies there when we need them. Or why don't they work for the local fire department, or drive an ambulance and get to the scene of an accident before it happens? If I were that psychic, I'd do those things, apply now for the Nobel Peace Prize, and promise to donate the proceedings to the Rhine Foundation so we could train even more psychic catastrophe specialists (PCSs).

In addition to making specific arguments like these, there are several general considerations I think it might be a good idea to keep in mind. A trap scientists commonly fall into is to get involved in an argument over factual details with a caller or a debate opponent. Such discussions quickly evolve into tirades of "Yes that's right" and "No that's not." An audience really won't know whom to believe in this situation. If possible, it is best to employ commonsense arguments to show up the logical fallacies of a certain area of pseudoscience. I have intended the

aforementioned arguments as examples of this principle. (I think I can speak about this trap with some confidence; I have fallen into it more than once in debates with creationists. It's just so *galling* to hear science so badly butchered.)

Although it is a trait of a good scientist to say, "I don't know," when he doesn't know, it does not enhance one's credibility when this becomes a common response. As painful as it is, those considering regular appearances on the media will need to know as much as possible about pseudoscientists. Read their books, learn their arguments; you *will* be tested on them. In many cases, pseudonauts use one another's arguments, so adequate preparation should give you a fair idea of what to expect from adversaries and should allow you to create your own counterarguments.

Finally, do not expect, as I did in Boston, to halt the march of madness single-handedly and immediately. Progress, if it comes at all, will come slowly. Certain local developments have convinced me that we are at least on the right track. First, other talk-show hosts on KLBJ are being much more aggressive and scientific in their questioning of pseudonauts. I was pleased to hear a palm-reader asked whether any independent studies had been undertaken to determine whether there really were any correlations between palm wrinkles and personality. Also, the former program director of KLBJ told me that he had been called by a local psychic. The psychic was complaining that several of his clients and potential clients were challenging him; they were asking him to explain whether he was just a cold reader, as some scientists on the radio had claimed all psychics were. From the way the program director described the tone in the psychic's voice, I would like to think he might have lost a few gulls.

However, progress is slow. Upon returning to Austin after a few months in Chicago, I found that the station that carried my program now features a weekly "psychic" show of call-ins and metaphysical discussion. The new program director has said that this show receives more calls per minute than any show the station has run.

Admittedly, battling back on the airwaves can be a frustrating, maddening experience. But, as Rabbi Hillel once said: "If I am not for myself, who will be. And if not now, when?"

Acknowledgment

I am grateful to Professor Rory Coker of the Physics Department of the University of Texas for many helpful suggestions and comments in the preparation of this article and in the area of pseudoscience in general. •

Rhode Island UFO Film: Fact or Fantasy?

'PM Magazine' aired a movie film of a 'UFO' and said it was not a hoax. The evidence points otherwise.

C. Eugene Emery, Jr.

The promotional announcement for the nationally syndicated television program "PM Magazine" contained an eye-opening promise. In its February 24, 1983, segment on "UFOs: Fact or Fantasy," "PM" officials promised that "for the first time [you] actually see a movie made with a hand-held camera. This is no hoax."

But viewers might have thought differently had they been told some of the facts behind the movie, facts that "PM" sometimes chose to ignore or never bothered to look for.

To best appreciate this untold story, it's helpful to know some background.

Harold Trudel is a 42-year-old Woonsocket, Rhode Island, resident who seems to have a gift for taking daylight photographs of UFOs.

He and a friend, Joseph Ferriere, editor of a now-defunct UFO magazine called *Probe,* claim that on the afternoon of July 24, 1966, they photographed two UFOs meeting in mid-air.

The next summer, over a 38-day period, Trudel says he took daylight photos of UFOs on four separate occasions. In one case, Trudel says, a mysterious man led him into the woods and told him, "There is what you came for." Moments later, a UFO reportedly rose from the trees and glided toward Trudel. The incident was made even more mysterious by the fact that the man who supposedly led Trudel into the woods could never be located.

But the photographs were not received without criticism. Six days after Trudel's encounters were publicized in the *Woonsocket Call,* UFO author James W. Moseley, who was in the area for a lecture at Dean Junior College in Franklin, Massachusetts, said the pictures were "almost too good."

Gene Emery is the science writer for the Providence Journal.

Moseley commented that "even the best" still photographs can be faked. He added that motion pictures provide the best records of sightings. That comment was widely publicized in the *Providence Journal* and the *Woonsocket Call.* In the *Call,* Trudel insisted again that his photographs were genuine.

And within 13 months, Trudel had taken one of the few UFO movies in existence.

Trudel says that he was alone in the woods in the neighboring town of Cumberland, Rhode Island, in September 1968 when he spotted a cylindrical object moving across the sky. Using a Super 8 movie camera he had borrowed to photograph UFOs, he filmed the object, which he estimated to be about 90 feet long, wider than a car, and traveling 40 to 50 miles an hour.

The 105-second black-and-white film is extremely shaky. (Trudel says he was *not* walking around the rocky hillside when he made the film.) It shows the object passing behind a tree.

Trudel took the film to Ferriere and, in spite of Ferriere's publishing experience, the two men didn't release the film publicly until 1982, when they were asked to make a presentation on UFOs at the newly opened Spiritual Psychic Development Center in Woonsocket. Trudel would later explain that the movie was never made public because interest in UFOs was waning back in 1968.

"PM" affiliate WJAR-TV in Providence found out about the film following last year's presentation.

"PM," which was looking for a skeptic to comment during the show, asked me to look at it. Because it bobbed in the wind and its horizontal motion was—to say the least—erratic, I told them that the "UFO" appeared to be a cardboard tube with a wire strung through it. Although my assessment was never aired, my curiosity was piqued.

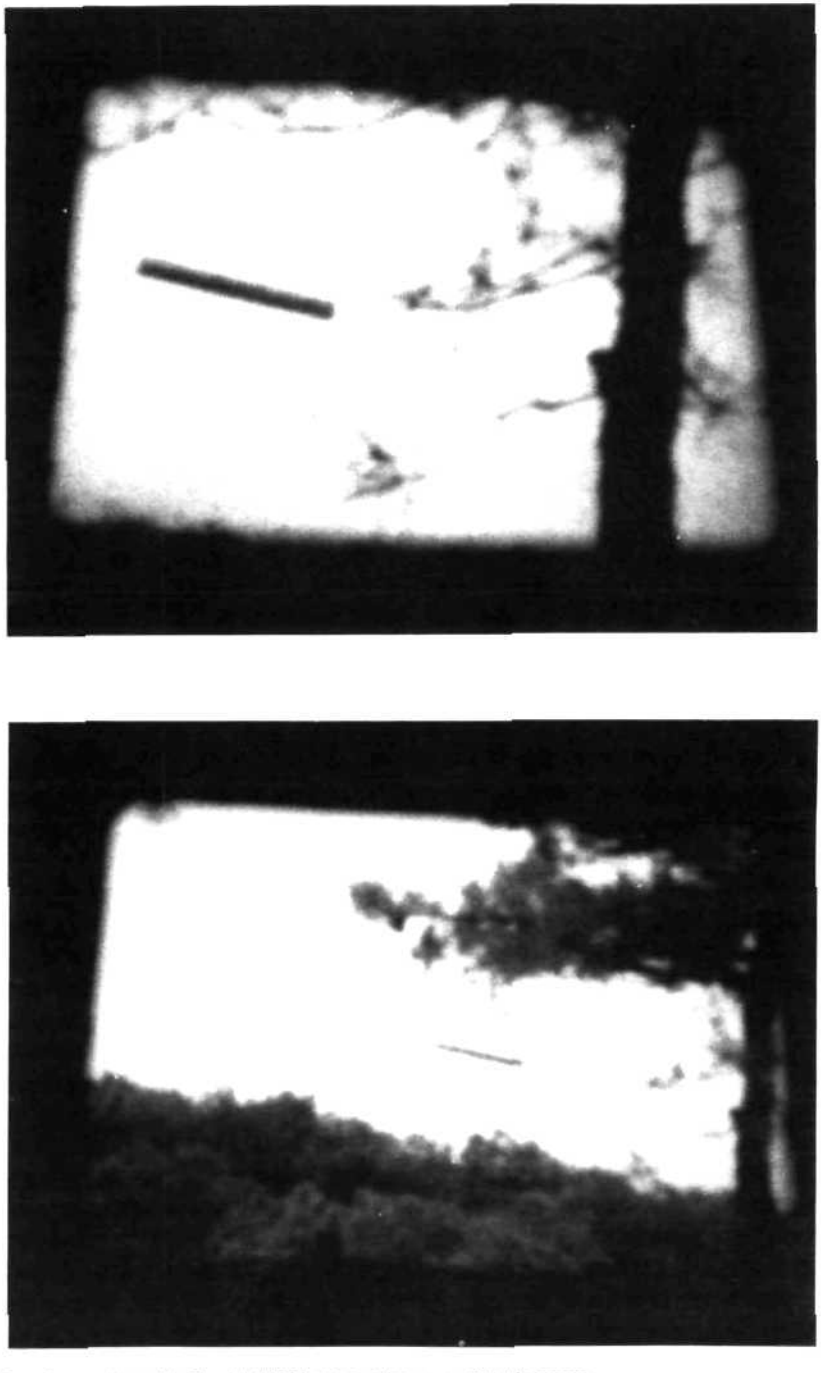
I obtained a copy of the film from Ferriere around January 1983. It was a copy because, Trudel claims, the original was missing. That's not all that was missing. Although Super 8 cartridges contain 50 feet of film, the 50-foot reel was only half-full. Neither Ferriere nor Trudel claim to know what happened to it.

And when I asked Trudel to accompany me to the spot where he had taken the movie so that measurements could be taken to aid in its analysis, he refused. "I would just as soon have it dropped," he said. "After so many years, the interest is gone."

But the UFO believers I took it to for comment were *very* interested. Unfortunately for Trudel, they also were not very impressed.

William H. Spaulding, director of Ground Saucer Watch in Phoenix, said his computer indicated that "the thing is very small and very close," which conflicts with Trudel's story.

Walter N. Webb, who has been looking into UFOs for about thirty years, considers himself a "skeptical believer," and serves as assistant



Two frames from the Trudel 'UFO' movie, shown on PM Magazine.

director of the Charles Hayden Planetarium in Boston, said the movements of the object are all consistent with a small tube suspended on a thin horizontal wire and pulled by a thread.

And even Donald Todd, a UFO buff from South Kingstown, Rhode Island, who was cited by "PM" as a UFO expert, said it appeared to be a hoax because, while the movie shows that Trudel was moving around when he took it, he never tried to get closer to it with his camera. Also, the motion of the object with respect to the tree and the background shows that the "UFO" was near the tree.

(Because the person who took the movie seemed to have so much trouble holding the camera steady, and to make sure the erratic movement of the "UFO" wasn't an illusion, I did an analysis of the individual frames where the tree provides a reference point. The bobbing motion became quite clear and very rhythmic, peaking about once every second. The object had virtually no momentum. At one point it was stationary, *then it jumped—if Trudel's length estimates were true—57 feet in 0.4 seconds* before coming to a dead stop again.)

Said Michael T. Francis, chief photographer at the Museum of Science in Boston: "It has hoax written all over it."

Unfortunately, none of the viewers of "PM Magazine" had the benefit of this information. Instead, the syndicate, run by Westinghouse Broadcasting, reassured the stations carrying the feature that "This is no hoax."

Facts indicating otherwise were certainly available.

Records of Trudel's previous sightings were in newspaper clip files. The issue of *Probe* that contains details of Trudel's four 1967 sightings, along with his encounter with the mysterious man, was filmed as part of the "PM" segment. And when the lone skeptic (myself) gave a down-to-earth explanation for the object, that part of the interview was not used.

In fact, the program producer of the segment, Michael Valerio of WJAR-TV in Providence, later admitted that after repeatedly viewing the film "I have not been able to convince myself that it actually shows a UFO."

So why did WJAR decide to air the film without criticism?

"I think it was important to present the film in an unbiased light so the viewer can make up his own mind," said Valerio. The statement from the national "PM" office saying that the movie was "no hoax," he said, "was not authorized by us." ●

Book Reviews

Ghost Stories and 'Ley Lines'

Poltergeist! By Colin Wilson. G. P. Putnam's Sons, New York, 1981. 382 pp. $14.95.

Reviewed by Michael R. Dennett

The movie *Poltergeist,* produced by Steven Spielberg, attracted considerable attention as well as millions of patrons last summer. Although it was endorsed by psi researchers Charles Tart, William Roll, and D. Scott Rogo and billed as the "first real ghost story," I doubt that many movie-goers viewed it as anything but fiction. However, Colin Wilson's book *Poltergeist!* may be taken seriously. Unlike the cinema version, the book is not intended as fiction but rather as the subtitle states: "A Study in Destructive Haunting." As an author of more than fifty books, three of them best-sellers, Wilson's credentials sound impressive. The dust jacket states that "Colin Wilson has compiled a striking study of the phenomenon of ghosts and the powers of the mind, examining the evidence of similar haunting tales recorded throughout history." The reader is further promised that "Mr. Wilson develops the elements of a masterful and definitive theory . . . and draws startling and convincing conclusions . . ." *Poltergeist!* is published by the long-established and reputable G. P. Putnam's Sons, which is in itself an endorsement.

At first glance, *Poltergeist!* resembles one of Frank Edwards's assemblages of wild and woolly tales. On closer examination, the reader will realize that it is much more than a collection of inexplicable events. What Colin Wilson has done in this book is to present science with a unified-field theory for paranormal phenomena!

The central theme deals with the manifestation of spirits and, in particular, mischievous ghosts (poltergeists). The author derives his unified-field theory in his analysis of where and how spirits obtain their energy. Others who investigated goblins before Mr. Wilson did failed to perceive the big picture. As a dowser,

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Michael Dennett is a writer and critic of fringe-science claims. He wrote "The Bermuda Triangle, 1981 Model," for our Fall 1981 issue.

Wilson claims to possess a special advantage in his search for hidden powers. The key, as it turns out, is in what the author calls "Ley Lines." Ley Lines, Wilson explains, are "in fact, lines of 'earth force.'" Ghosts are able to obtain their power through the Ley Lines that crisscross the earth's surface. According to Wilson, Ley Line hunters have noticed that "a remarkable number of reported hauntings, poltergeist occurrences, and sightings of 'unidentified flying objects' seemed to happen on them, particularly at the crossing point of one or more 'Leys.'"

Wilson believes that some spirits are discarnate humans. Living people, according to the author, produce an excess of energy that the body does not always control. When a leakage of this human force occurs, ghosts are able to siphon it off through the Ley Lines. Telepathy, psychokinesis, and clairvoyance are examples of this not fully explained human force. Not content with a theory that connects ESP and the spirit world, Wilson proceeds to link virtually every paranormal phenomenon to his interconnected energy field. Psychometry, levitation, and the existence of gnomes can be tied to the unified field. Not surprisingly, the Great Pyramid and Stonehenge turn out to be intersections of many Ley Lines. Ancient peoples, we learn, were more in tune with nature and therefore more aware of the forces that surrounded them. Medieval peoples, it appears, were on to something also; for Wilson confirms that there is evidence for possession by spirits. Reincarnation is a possibility, too. Perhaps most frightening is Wilson's revelation that black magic, Voodoo, and the casting of death spells are a reality.

Unfortunately, although Wilson is adept at making extraordinary claims with reckless abandon, he is not willing to back them up. The reader will search in vain for the slightest whiff of evidence about "possession by spirits" or for any data suggesting that an "earth force" actually exists. The author indeed holds himself above the facts. For anyone who might doubt the existence of goblins, Wilson writes that "the poltergeist is undoubtedly a reality, and that anyone who thinks otherwise . . . is being wilfully blind or stupid."

All of this is not to say that Wilson has not done any research. Investigation in this area was not easy, for as the author tells us "spirits are liars more often than not." Fortunately, there is Guy Playfair. Playfair, with whom Wilson met at length, has done a great deal of study into spooks and assorted types of black magic, most of it in Brazil. Playfair's work, judging from Wilson's description, was hopelessly incompetent in method and infantile in its conclusions. As an example, Wilson relates a story told by Playfair of a young woman who incurred a black magic curse or "trabalho" for removing a small statue of the sea goddess Vemanjá from its correct place. Although subjected to significant misfortune, according to the story, the woman was saved just in time by returning the idol to its rightful place and thus breaking the curse.

In my opinion, *Poltergeist!* displays none of the characteristics of a work by an accomplished author. The chapters are far too long and often tedious. Some sections ramble on and at times it is difficult to understand what theory the author favors. It is clear that on page after page the author is endorsing or inferring the existence of such things as fairies (with wings), auras, witches, automatic writing, and nereids. As an example, on page 56 he writes, "There have been dozens of well-authenticated cases of 'human electric batteries.'" In his conclusion, he writes about the spontaneous combustion of humans and, in Chapter 7, about a girl who "could read with her stomach."

One suspects that the entire book is a put-on. In one case, we read about the

appearance of King Arthur's ghost and, in another, about an encounter with the Devil. Yet Wilson's vehement attacks on doubters and his past record of works favorable to pseudoscience incline me to believe he is serious. Wilson is apparently not joking when he writes about the "remarkable account of a local sorcerer named Isidoro who was able to turn himself into a cassowary [a kind of ostrich]." These outrageous tales, untainted by even the slightest skepticism, are what the publisher calls a "striking study." Wilson's "masterful and definitive theory" is nothing more than an unwarranted assumption that powers that very likely don't exist are responsible for events that very likely don't occur.

There are other significant portions of *Poltergeist!* that cast doubt on Wilson's research or intentions. For instance, he refers to the Fox sisters on four separate occasions. In each case, he infers that the sisters were a part of an authentic phenomenon. The truth is that Margaret and Katherine Fox were frauds, something of which Colin Wilson must surely be aware. The Fox sisters had faked their many episodes of spirit communications (in the form of rapping sounds), and this has been known as a certainty since the evening of October 21, 1888, when the two of them appeared in front of a crowd of some two thousand people and demonstrated how they did it.

As is so often the case with books promoting fake science and quack theories, the author makes no attempt to refute the work of critics—in this instance, that of Milbourne Christopher and others on poltergeists. The publication of *Poltergeist!* as nonfiction by such a creditable publishing house indicates that now more than ever there is a need for the counterbalance of the SKEPTICAL INQUIRER and CSICOP. •

The Future That Wasn't

Jack Gillen Predicts. By Jack Gillen. Grand Trine Publications, Hollywood, Fla., 1975. $9.95.

Reviewed by Gordon B. Chamberlain

Like doctors, astrologers bury their mistakes—in the graveyard of oral tradition or in the morgues of old videotapes and back issues. Jack Gillen, atypically and unwisely, made a book out of his, detailing future events from 1975 through 1981. Published in 1975, *Jack Gillen Predicts* presented "simple unadorned statements of things to come . . . a roadmap to tomorrow" (p. xvii); and promised a sequel covering 1981-90. Now that the time has expired for the author's next to last dated forecast (the death in 1981 of the recently reelected Democratic president [p. 212]), let's see why the sequel has apparently been canceled.

Methodology: For people who believe this sort of thing, this is the sort of thing they believe. Houses and cusps, aspects and afflictions; a sun cycle rounded

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Gordon Chamberlain is a historian.

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off to 20 years to match the presidential deaths (pp. 4–5) and an arbitrary 36-year cycle that makes the years 1765–1800 weak for the United States because of Saturn (p. 13); seven working planets (pp. 4–9), including the sun and the moon but excluding Uranus and beyond. The sun also rules "the U.S. and Russia . . . power, ambition, the white-skinned peoples of the world . . . health, principle, general prosperity and position . . . authority, energy, fire, glory, gold, hope, pride and persistence." "Yellow-skinned or Oriental peoples" rate the moon, whose other responsibilities—*yin,* it would seem, to the sun's *yang*—include "change, home, the environment . . . liquids, the mother, emotions, family . . . changes in the weather, restlessness in people," and of course "laundry." Venus rules the sexy Latins; language-lord Mercury, the bright verbal Jews; malefic Saturn, the blacks. Western astrology has always been culturally blinkered (Chinese and Maya systems are quite different), but has anyone besides Mr. Gillen depicted it as blatantly racist?

One feature may be the author's own. Your fate is written in the stars from the moment you are born—right? Very well: to change your fate, change your birthdate. If not for individuals, this works for nations; all they need is a good political upheaval. Brazil, for instance, was born not by breaking with Portugal in 1822 or ousting its emperor in 1889, but on the "far more fortunate" April 21, 1960, when a junta took over "with the good aspects from the Sun to Jupiter" (pp. 134, 136). Comparable opportunities exist or have existed for Cambodia, Costa Rica, and Cuba (pp. 137, 149, 151, respectively). Israel might put an end to its problems with "a new and fortunate birthdate" (p. 176); but "Egypt, with a birthday of June 18, 1953, will never see peace" (p. 156). In Chinese geomancy (*feng-shui*), a family could change its luck by remodeling a house or moving an ancestral grave; the labor-saving West simply rewrites birthdates.

Now for the proof of the pudding. "I am reporting planetary influences," the author warns (p. 56), "not making flat statements of what will occur"; but readers must have found his statements flat enough.

1975: "A National Health Insurance Program . . . will be a foregone conclusion" (p. 45); "I predicted a record high for gold in 1975 and I stand by that prediction" (p. 47; it was down all year); death of Chou En-lai (p. 49; not until 1976).

1976: Raiders in the Super Bowl (p. 61; Pittsburgh 21, Dallas 17); women's liberation "taken for granted," even in combat arms (p. 66); a new pope, "swarthy and very dark-skinned" (p. 60; Paul VI lived until 1978); a stock-market low on April 12 (p. 63; it was up); Castro and Sadat either ousted or dead (pp. 150, 156).

1977: "A 'friendly' virus will be discovered that can fight leukemia" (p. 72); King Hussein dead (p. 179) and Tito out (p. 208; he died in office in 1980); "revolt in France or Italy" (p. 77); Dow over 1000 (p. 69; not quite).

1978: "The four-day work week will be almost universal" (p. 86); "a tidal wave is expected for Miami" (p. 89); Laos ceases to exist as a nation (p. 180). Also a new emperor in Ethiopia (p. 160) to succeed Haile Selassie—who was ousted by a coup, apparently without Mr. Gillen's noticing, in 1974.

1979: "We will be an ally . . . surprisingly, of Russia" (pp. 96–97); "a national transportation system is off the drawing boards" (p. 101); "legalized gambling . . . is now almost universal" (p. 97).

1980: Labour Party still "in firm control" of Great Britain (which the author Saxonishly alphabetizes as "England," p. 179); Democratic president reelected

with black running-mate (p. 116); biggest California earthquake in history (p. 111); and biggest news of the year is when Russia puts "Blood on the Moon" (p. 195).

If somehow you missed all that, just think what you saw that Mr. Gillen didn't. Casting horoscopes for "selected countries through 1980" and using birthdates he selected himself, he predicts "little or no political unrest" for Poland (p. 192), a nuclear-weapons buildup in the Shah's Iran (p. 173), and nothing at all for such unlisted countries as Afghanistan and El Salvador. An index, if there were one, would also conspicuously omit Camp David, the China-Vietnam conflict, ERA, both John Pauls, the oil glut, the 1980 Olympic boycott, single-parent families, *Star Wars* ripoffs, Margaret Thatcher, and video games.

Selections only? Certainly; only predictions big and specific enough to check. No sense giving Mr. Gillen credit for routine sports scandals, crime waves, labor troubles, or worries about inflation; no point poring over microfilms for every earthquake and plane crash; one needn't eat the whole egg to know it's rotten. Nor need we regret the aborted sequel, with its third-party presidential victory in 1984, a revolt in China, the outbreak of World War III, and the "New Ice Age" of the 1990s (pp. 211–13). For predictions up to publication date, Mr. Gillen's editors claimed 96.5 percent accuracy (p. xvi). Can it be that when an astrologer publishes in hard cover, as when a psychic performs under laboratory controls, unfriendly forces intervene to throw him off?

Yet *Jack Gillen Predicts* may still be useful. Social historians will find it a rich lode of the wish- and fear-fulfillment syndromes of the seventies. The author fears atomic war and overpopulation, but also inflation and crime; he hopes for fewer and cleaner cars, national health insurance, recycling, and women's lib; he believes in the California quake, the Age of Aquarius, and the Russian menace: in two words, granola populism. And a science-fiction writer could do worse than use Mr. Gillen's predictions for alternative history. A world without either Camp David or Khomeini has already served as the background for Paul Erdman's best-selling *Crash of '79*; now for one where technicians in Paraguay revolutionize the world energy problem (p. 189), "possible licensing for parenthood" sparks controversy in the U.S. (p. 74), Canada hosts the 1980 Olympics (p. 139) to the accompaniment of a superpower war scare and Russian nuclear tests on the moon (pp. 117, 195), and in 1981 a black vice-president succeeds to the White House (pp. 116, 212). If every astrological forecast designated only a single future out of the infinitude—one choice of forking paths in Borges's garden, one imaginable fate for Schrödinger's cat—how much less would true believers need to explain away! •

Some Recent Books

Listing here does not preclude more detailed review in a future issue.

Abell, George O. *Exploration of the Universe,* 4th ed. Saunders College Publishing, Philadelphia and New York, 1982. 721 pp. New edition of leading astronomical textbook. Excellent and thorough primer on all aspects of astronomy and an introduction to the rational exploration of nature for the liberal-arts student.

Broad, William, and Nicholas Wade. *Betrayers of the Truth: Fraud and Deceit in the Halls of Science.* Simon and Schuster, New York, 1982. 256 pp. $14.95. Perceptive report on the recent cases of scientific fraud and the issues raised by them. (See listing in Spring *SI,* p. 74, based on a prepublication excerpt.) Only a few pages, in a chapter on "Self-Deception and Gullibility," are concerned with paranormal and nonmainline science subjects (the Levy fraud at the Rhine laboratory, the SRI tests of Uri Geller, and the Shroud of Turin Research Project). But the wider issues discussed are of concern to all. Also, if, as the authors suggest, the traditional scientific method is not adequate to detect fraud and self-deception in mainstream science, how much worse is the problem in the fringe- or proto-sciences?

Hardin, Garrett. *Naked Emperors: Essays of a Taboo-Stalker.* William Kaufmann, Los Altos, Calif., 281 pp. $15.00, cloth; $8.95 paper. Thirty essays on immigration, evolution, human ecology, and language by the always provocative Hardin. The essay "'Scientific Creationism': Marketing Deception as Truth," is of special interest here.

Parker, H. and D. *The Secret Self.* Self-published, Sydney, Australia. (Available from P.O. Box 68, Pendle Hill, NSW 2145, Australia.) 125 pp. $5.95. Said to be the first book published on this worldwide sect also known as the "Nameless House Sect," "The Cooneyites," and "Two by Two preachers." Examines the claims of this sect to be directly descended from the time of Christ and finds it actually to have been founded in 1899 by William Irvine.

Webner, Klaus. *Die Nagora Fotoserie.* Klaus Webner, Zugspitzstrasse 56, 6200 Wiesbaden, West Germany, 1982. 32 pp. $7.00, booklet. (Price includes airmail postage.) Study disproving the authenticity of the series of twelve UFO photographs made in 1971 by Rudi Nagora and his wife, widely published as real evidence of a flying saucer. In German. With 24 photos and 3 drawings.

—*Kendrick Frazier*

Articles of Note

"Archaeological Chemists Grapple with Shroud of Turin." *Chemical and Engineering News,* Feb. 21, 1983, pp. 34–35. Report on the continuing dispute between members of the STURP project and other scientists over interpretations of chemical microanalysis of the shroud.

Cowling, T. G. "Astrology, Religion and Science." *Quarterly Journal of the Royal Astronomical Society* 23(4):515–526, December 1982. Article by mathematician tracing the history of astrology from the Chaldeans—for whom, given the state of their knowledge and traditions, "astrology provided a reasonable model"—to today. Because the need to compare astrological tenets with nature at each fresh step was too little appreciated, astrology is now a "stale, superstitious relic of what was once . . . a glorious philosophical attempt to understand and rationally explain the universe."

Dietz, Robert. "Scientists, Gamblers, and Magicians: Allies Against the Irrational." *Humanist,* March–April 1983, pp. 9–11+. Interesting and important article from viewpoint of a professional gambler and handicapper about the skills and thought-processes they and magicians have cultivated that are helpful in analyzing paranormal claims and detecting deception and self-deception in paranormal experiments. As a matter of financial survival, professional gamblers, at least as much as scientists, have "undergone rigorous training to minimize their perceptual and reasoning biases," says Dietz. "Gamblers and magicians can provide the sensitizing touch and trained eye science needs when studying paranormal claims and irrational beliefs."

Donnelly, Fred. "What the Suns and Stars Don't Tell." *Policy Options* (Canada), March/April 1983, p. 39. Commentary laments widespread publication of astrology columns and lack of science columns in newspapers.

Downey, Charles. "UFOs Are Bunk!" *Kiwanis Magazine,* February 1983, pp. 34–37. The half of this article that actually deals with UFO claims (the first half is about scientific arguments over the likelihood of extraterrestrial intelligence) draws on the critical analyses of Alvin Lawson, James Oberg, and Phillip J. Klass.

Dutch, Steven I. "Notes on the Nature of Fringe Science." *Journal of Geological Education* 30:6–13 (1982). Excellent essay that includes sections entitled "Why Study Fringe Science?" "Fringe Science and Scientific Method," and "Major Logical Fallacies of Fringe Science" (Dutch lists 11 types).

Gardner, Martin. "Anti-Science: The Strange Case of Paul Feyerabend." *Free Inquiry,* Winter 1982–83, pp. 32–34. Interesting discussion of the Berkeley philosopher who contends science is more like a church than a rational undertaking. To most philosophers, says Gardner, Feyerabend is considered a "brilliant but tiresome, self-centered, repetitious buffoon whose reputation derives mainly from the noise and confusion he generates and the savagery with which he pummels everybody who disagrees with him."

Gould, Stephen Jay. "Unconnected Truths." *Natural History,* March 1983, pp. 22–28. Essay on what Gould considers one of the best examples of the difference

between science and pseudoscience. It concerns geologist-clergyman William Buckland's 1823 treatise contending that widespread gravels and organic remains in caves were evidence of a universal flood. But his theory was testable. When empirical evidence showed it to be wrong—the gravels and cave deposits were produced by episodes of continental glaciation, not a universal flood—he subjected his earlier arguments to rigorous self-criticism, found they did not hold up, and he and his leading supporter, the Rev. Adam Sedgwick, forthrightly recanted. Buckland, in fact, became one of England's first converts to glacial theory. The case illustrates the difference between dogmatism, which cannot change, and true science, which of course does. "The final irony and deep message," concludes Gould, "is simply this: flood theory, that centerpiece of modern creationism, was disproved 150 years ago, largely by professional clergymen who were also geologists, exemplary scientists, and creationists. The enemy of knowledge and science is irrationalism, not religion."

Patterson, John W. Review of "Creationism in the Science Class," a TV documentary on the creationism vs. evolution issue by KWWL-TV, the NBC affiliate in Waterloo, Iowa. Unpublished. (Review available from Patterson at Materials Science and Engineering, 110 Engineering Annex, Iowa State University, Ames, IA 50011.)

Rotton, James, I. W. Kelly, and James Frey. "Geophysical Variables and Behavior: X. Detecting Lunar Periodicities: Something Old, New, Borrowed, and True." *Psychological Reports,* 52(1983):111–16. Critique of errors in studies on phases of the moon and abnormal behavior. Extends and supports an earlier review by Campbell and Beets, which suggested that chance alone was operating in studies that found apparent relationships between phases of the moon and behavior. Rotton et al. find that "computational errors, inappropriate analyses, and violations of statistical assumptions are also responsible for positive findings in this area." They propose more appropriate procedures.

Shine, Adrian. "The Biology of Loch Ness." *New Scientist,* Feb. 17, 1983, pp. 462–67. Field leader of Loch Ness and Morar Project reports data "consistent with the presence of large animals." He suggests that technical means are now at hand "perhaps to show that there are monsters, perhaps to find, at least beyond reasonable doubt, that their existence is too unlikely to warrant further study."

Strentz, Herb. "What the Seers Thought They Saw." *Des Moines Register,* December 31, 1982. Column by Drake journalism dean finding that of 55 "psychic" forecasts he kept track of in 1982, two were half-right, a score of 1 for 55. The all-star psychics Strentz has tracked since 1978 are now 1 for 315.

Following are some of the notable articles in the media about James Randi's Project Alpha Experiment: "Psychic Abscam," *Discover,* March 1983, pp. 10–12 (this was the first article announcing its results); "Magician's Effort to Debunk Scientists Raises Questions," *New York Times,* Feb. 15, 1983, p. C3; "The Amazing Randi Hoodwinks the Spoonbenders," *New Scientist,* p. 287, February 3, 1983; "Magicians Score a Hit on Scientific Researchers," *Washington Post,* March 1, 1983. Randi's two-part formal report on the experiment begins in this issue of the SKEPTICAL INQUIRER.

—*Kendrick Frazier*

Films/TV Programs

"I Am No God." CM Films, Perth, Australia, Carmelo Musca, producer. 72 minutes, 1982. A film about the visit by a group of Australians to Filipino psychic surgeon Alex Orbito. The film shows their expectations before leaving Australia, their operations, and their reactions to the operations. The producer filmed the operations with a hand-held camera in front of the surgeon while secretly running a hidden camera without the knowledge of the surgeon. The film shows sleight-of-hand trickery so clearly that even parapsychologists have had to admit that Orbito uses trickery "sometimes." The film has been shown on Australian television. —*Review note by Mark Plummer.*

"Magic or Miracle." NBC Television Network, 9-10 P.M., E.S.T., February 8, 1983. Executive Producer, George Schlatter. A George Schlatter Production. The first half of this television special was billed as a confrontation between "psychic" Uri Geller and master magician James Randi. Unfortunately, the producers let Geller, who was paid an enormous sum for an afternoon of filming at his home, get away with too many bald assertions that "what magicians do is trickery, what I do is real." Randi was not allowed to confront Geller in person, which would have made for a lively encounter. The following segment was spent with Randi on "a search for a genuine miracle" among the fire-walkers of Sri Lanka, psychic surgeons of the Philippines (a blatant verdict of fraud was convincingly presented), and faith healers. The final 15 minutes came alive with a newly filmed segment about Randi's just-revealed Project Alpha. Included were interviews with Michael Edwards and Steve Shaw, the two young magicians-posing-as-psychics Randi arranged to have tested at Washington University and who easily managed to deceive the scientists into believing they had real paranormal powers. This redeemed the program from a skeptical observer's point of view.

—*K.F.*

The Wonder and Magic of the Truth About Nature

There are some not-very-bright and/or badly educated people who complain, with apparent sincerity, that scientific research destroys the wonder and magic of nature. One can imagine the indignant reaction of such poets as Tennyson or Shelley to this nonsense, and surely it is better to know the truth than to dabble in delusions, however charming they may be. Almost invariably, the truth turns out to be far more strange and wonderful than the wildest fantasy.

—Arthur C. Clarke, in *The View From Serendip* (New York: Random House, 1977), originally in *Mars and the Mind of Man* (New York: Harper and Row, 1973).

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SPEAKERS
(other names are being added)

James E. Alcock, *York University, Toronto*
Stephen Barrett, M.D., *Co-chairman, CSICOP Paranormal Health Claims Subcommittee*
Irving Biederman, *SUNY at Buffalo*
Mario Bunge, *University of Montreal*
C.E.M. Hansel, *University of Wales*
Ray Hyman, *Stanford University*
William Jarvis, *Co-chairman, CSICOP Paranormal Health Claims Subcommittee*
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James Randi, *professional charlatan*

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From Our Readers

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In defense of skepticism

Arthur S. Reber's "In Defense of Skepticism" (Winter 1982–83) makes a couple of good (if rather obvious) points but can hardly be said to constitute the final word on the subject. Apparently, Reber is relatively unfamiliar with the "psi" literature (he calls Schmidt's 1969 paper a report on clairvoyance, instead of precognition, and equates remote viewing and astral projection, etc.), and he reacts to what he *believes* the proponents claim instead of what they actually claim.

It is not clear to me why he thinks other skeptics have typically missed the important larger issues of philosophy and science. Most skeptical books and other publications I am aware of squarely address these issues. However, most skeptics realize that we also need a critical reaction to *specific* evidential claims. That's why CSICOP was established in the first place.

I do not know how Reber would define "believers," but where he implies that the believers are characterized by their failure to recognize the profundity of the three canons and the psychological law I must conclude that several prominent "proponents" do not qualify as believers. The parapsychology literature abounds with lengthy and profound discussions of such issues. Reber asserts that "nature is reliable" and implies that the nonskeptics will angrily reject this bold statement. This may be true for a good many nonskeptics, but by no means for all of them. Many leading parapsychologists *also* assume that nature is reliable, and that is why they look for a lawful pattern behind all this "psi" noise. They assume that, if psi exists at all, its "capriciousness" and "unpredictability" is only apparent—a measure of our present ignorance.

Reber writes: "We are being asked by them [the parapsychologists] to accept a group of effects that are not replicable and which suggest that nature is not reliable." I could name quite a few parapsychologists who would never ask Dr. Reber to accept that. . . .

In summary, there are quite a few leading proponents who would agree to the following statements: (1) "Psi" has not yet been demonstrated beyond reasonable doubt. (2) If "psi" exists, a scientific explanation will be possible. (3) If this explanation is found it will be shown that it does not contradict Reber's canons.

Piet Hein Hoebens
Amsterdam, The Netherlands

The skepticism of the skeptics and the means to circumvent this skepticism may not be as easy as Arthur Reber indicates. Some of the problems in his assumptions regarding "psychological inertia" and other difficulties in advancing science can be partially illustrated by expanding on his explanation of why Freud was scientifically accep-

table and Reich was not by examining their biographies.

As Freud's biographers have explained, Freud had a great deal of interest in psi, but his colleagues advised him to keep these interests to himself lest he become mired in that controversy and do irreparable harm to the scientific respectability of psychoanalysis. Hence he suppressed his interests in psi. Incidentally, Freud has been praised for keeping "an exquisite balance between skepticism and credulity," much like the parapsychologists that Piet Hein Hoebens (pp. 2–4, Winter issue) congratulates. Freud also seems to have found reasons to fear "occultism." Although the reasoning behind this is obscure, his fears seem to have been similar to those of Kurtz and others: that the popular belief in the paranormal (perhaps even if it is scientifically validated) can foster socially virulent forms of irrationality that can destroy civilization as we know it. The point, however, is that Freud was scientifically acceptable partially because he avoided areas of controversy.

The controversy surrounding Reich and his work is also far more complicated than Reber indicates, and one may readily refute Reber's assertion that Reich's ideas were no more offensive than Freud's; for Freud did not advocate the sort of "sexual revolution" that Reich did. Indeed, Reich was controversial long before he discovered orgone and contradicted the laws of thermodynamics. The psychoanalysts disowned Reich because he was a communist using psychoanalysis to legitimize social reforms, and the communists disowned him for preaching his own particular sort of communism. Since Reich's ideas about orgone grew out of his attempts to scientifically legitimize the social reforms he was advocating, one might think that Reich's radicalism was a reason behind the debunking of his discoveries. . . . Finally, some of Reich's biographers have contended that his persecution was due in part to rumors regarding his psychotherapeutic practices, among these being males masturbating to the sight of bare-breasted women. Hence it is explained that the technical reasons for Reich's arrest were merely technicalities that legitimized Reich's persecution but by no means explain the reason for this persecution. One may still quite rightly point out that Reich was insane and was making money off the ignorant and was therefore rightfully ignored and arrested, but his case is still a rather messy one.

In neglecting to mention the points above, Reber's explanation seems to imply that such scientifically extraneous factors have little influence on the development of science. Historians and sociologists of science have long debated the extent to which science is influenced by sociocultural factors; and, while Reber implies that these extraneous factors do not influence science, the points that he neglects can be marshaled to suggest that such factors have influenced science's development.

Christopher C. Scott
McLean, Va.

As an open-minded rationalist who believes there is a logical explanation for everything, I am a bit dismayed by Reber's article. Admittedly the piece is a well-written defense of skepticism. More important, it is a revealing and coherent explanation of the mind-set of the skeptic, and for this we should all be thankful. However, when all is said and done its author leaves himself wide open to the charge that he is himself one of "the dogmatists" he refers to in his fourth paragraph.

What is to prevent someone from charging that the author's "three fundamental 'canons'" ("nature is reliable," "science is coherent," "explanation is mechanistic") are little more than dogmas by another name? True, the canons seem plausible enough, for they square with the normal world we are familiar with, but so did Newtonian physics before Einstein and Ptole-

maic astronomy before Galileo.

T. H. Graf
Washington, D.C.

The article on why skeptics are skeptical by Arthur S. Reber was one of the best things I have read in the SKEPTICAL INQUIRER.

James Gardner Erickson
Minneapolis, Minn.

The Andreasson affair

In his review of *The Andreasson Affair, Phase Two* in the Winter 1982-83 issue, Ernest H. Taves mentions an incident in the book involving a glass door and speculates that this concept was, in some way, derived from "Through the Looking Glass." Dr. Taves may be familiar with his "Alice" but it is apparent that he is not a reader of science fiction—though I'd be willing to bet that Betty Andreasson and/or Bob Luca read a lot of it. The quotes used by Dr. Taves indicate clearly the derivation of a number of the few incidents he mentions.

The description of the ball of light that strikes Betty's forehead, sticks, and transmits a message to her is a near-perfect transcription of the main incident in the fantasy short-story "Saucer of Loneliness," by Theodore Sturgeon. In it, a lonely, depressed young woman encounters the title object, which turns out to be a sort of cosmic bottle bearing the message that there are higher and greater beings in the universe with burdens of loneliness and despair that make hers minor.

A black BB-sized object on the forebrain is one of the elements of a very complex plot developed by Philip Jose Farmer in his "Riverworld" series, published under the titles *To Your Scattered Bodies Go, The Fabulous Riverboat, The Dark Design,* and *The Magic Labyrinth.*

Even the "enormous bird" rings a bell as it ("The Bird") is a plot element in Robert Heinlein's short story "The Unpleasant Profession of Jonathan Hoag."

Personally, I'd be a lot less hesitant than Taves was to conclude that the whole thing is just a lot of "shuckin' and jivin.'" I reach this conclusion through the application of the famous Razor—if I can spot a goodly number of the "incidents" described as being essentially identical to plot elements I have encountered while reading my favorite form of fiction why should I not conclude that the Lucas got them from the same place?

William Dahlgren
Glenview, Ill.

I was a bit distressed by Ernest Taves's review of *The Andreasson Affair, Phase Two.*

Dr. Taves refers to Fred Max as a "qualified" and a "professional" hypnotist who had an undergraduate degree in "behavioral" psychology. These descriptions tend to make Max look more entitled than is his due. There is no such area as "behavioral" psychology; *all* psychology is behavioral. Undergraduate majors in psychology are nonspecific and not applied. Hence Max's degree has little relevance to his practice.

A professional hypnotist is a person who earns his daily bread through the use of hypnosis. Such individuals are, however, amateurs—in the sense that they are rarely, if ever, students of the hypnotic phenomena or well grounded in human personality dynamics. Max's statement that he had "never seen such fear in a subject under hypnosis" probably merely reflects his lack of experience with a broad range of subjects, especially psychiatric patients.

The word "qualified" suggests that an acceptable method of assessment of skill, such as a state licensing board or a medical or psychological specialty board, has been involved. State regulation of the practice of hypnosis is rare;

the professional specialty boards do not accept lay candidates.

It would not surprise me to learn eventually that many of the fantastic adventures of Betty and Bob were indirectly due to the employment of a lay hypnotist.

Eugene E. Levitt
Director, Section of Psychology,
and Prof. of Clinical Psychology
Indiana University School of Medicine
Indianapolis, Ind.

I am surprised that Ernest Taves does not see that *The Andreasson Affair, Phase Two,* like its predecessor, is the result of hypnotic fantasies (as discussed in *SI,* Spring 1981) that the subjects believe are fact. Psychoanalysis (now) will not unravel the tangled web in which fact and fiction are inextricably mixed. The subjects will not now be able to tell what really happened and what pseudo-memories have been imprinted by hypnosis. Certainly events in Betty Andreasson's past will have been used by her mind to build the fantasy, but her memory is now damaged.

Speaking in tongues is called glossolalia, and, as Mr. Taves says, has an ancient history. Betty did not need to be familiar with it; she only needed to enter the state of rapture of which glossolalia is a symptom. Glossolalia is common in the Pentecostal churches.

Steuart Campbell
Edinburgh, Scotland

Loch Ness photos

Steuart Campbell's article on the Loch Ness monster (*SI,* Winter 1982-83) was particularly interesting, as we have followed the monster's career since our childhood.

We would like to add a few observations on the photographs on pages 43-44:

1. Figures 1 and 2 are two printings from the same negative. The highlights and shadows on the moving water are identical in both. The "animal's lower jaw" is touching the water identically in both.

2. The "tail" in Figure 2 is artificially added. Unlike the rest of the "animal," it casts no shadow on the water. Its lower outline is straight, not rounded like a genuine tail or treetrunk.

3. While one can hardly pronounce dogmatically on the possible range of variation in plesiosaurs, the hump on the back and the blunt hind-end of the "body" seem improbable in a streamlined swimming animal. The blunt hind-end is also incompatible with the curved "tail" in Figure 2. (One of us [JFW] is a vertebrate biologist with a specialization in locomotor anatomy.)

4. Figure 3 shows two sets of ripples. One set is approximately parallel with the lower edge of the figure. The other radiates out from the floating object and intersects the first, especially conspicuously near the lower left and lower right corners. These waves suggest that a wind blowing toward the camera was shaking an inert floating object. The low amplitude and short wavelength of the radiating set indicate that the movement of the floating object was a rapid but slight oscillation, not the movement of a swimming animal.

5. Our only reservation about the article is to question that one could recognize, nine years later, a photograph of a particular treetrunk seen floating on a particular evening (p. 45, line 9). This seems improbable but could be accounted for if: (a) floating logs are very rare in the loch, so that appearance of one is remarkable; (b) this log floated for several weeks or months and was seen repeatedly; (c) the informant keeps a log of his observations of the loch, or is known to have an exceptional memory for comparable phenomena.

These comments are not intended as challenges to the informant's veracity. We merely think that the argument could be strengthened by dealing with these points. In any case, they do not

weaken the conclusion that the photographs do not represent in good faith a swimming animal.

James F. Waters, Prof.
of Zoology
Virginia L. Waters
Humboldt State Univ.
Arcata, Calif.

I am a "new boy" (one year) to your magazine and greatly appreciate it, as one of the very few islands of sense in a sea of nonsense.

However I was disappointed by the author of the Loch Ness "Monster" story on several counts. He says Figure 2 shows the same tree as photo 1 "after a little more of it had surfaced," then that "Figure 3 shows the same tree after it had become waterlogged." This strikes me as a most unlikely sequence of events. He had merely to exchange the numbers for Figures 1 and 2 to make a more believable presentation. Further, he makes no comment on the third and rearmost hump in photo 2 which appears to be in better focus than the rest of the "monster," thus making it a prime suspect as an artifact. For the same reason I am very suspicious of the second hump in Figure 1. (Same for the bottom of the jaw in Figure 1?) Also the size and contour of the second hump seems implausible.

By far the most serious oversight occurs when he fails to recognize that the photos in Figures 1 and 2 are identical. Therefore the third hump is a proven fraud. The proof is that both photos have identical "fingerprints" when the wave patterns on the water surface are compared. For example, one can see in Figure 1 a strip of light immediately in front of the "monster's" head. Above this and displaced somewhat rearward is another similar strip. Again, above and displaced rearward is a conspicuous third light strip. The same three features are obviously apparent in Figure 2 and are quite unambiguous, especially when viewed under a magnifying glass. Many other identical water surface details can be identified that are common to both photos, making it infinitely unlikely that the two photos are not the same.

Stuart Lucas
North Bay, Ontario
Canada

I much enjoyed the article by Steuart Campbell about the alleged Nessie photos of Frank Searle. I think in all fairness, that I ought to tell you that I found out on my own trip to Loch Ness last summer that none of the major investigators who do research there feel that Searle's photos are valid, and some have even uncovered evidence that points to fraud. I hope your readers do not get the impression that Nessie investigators as a group are in favor of Searle's photos, for they are not. They are the equivalent of the Billy Meier photos in UFOlogy, which of course, no UFOlogists of any repute support either. To his credit, however, Searle has spent many days and nights on the Loch, and he maintains an information station that shows many clippings and lists the current sightings for each year. Perhaps someday he will obtain the real thing in terms of photos. It is of course regrettable that he had to introduce the fakes to draw attention to himself.

J. Erik Beckjord
Seattle, Wash.

Fell and the anthropologists

Let me say at once that I fully support the efforts of the SKEPTICAL INQUIRER to cleanse the mental climate of our time of the irrational claims of the paranormal. I am therefore surprised that *SI* should give so much scope to attacks of an anthropological nature by people like Marshall McKusick and J. R. Cole, who lump Barry Fell together with such pundits of the irrational as von Däniken and exponents

of astrology, UFOism, ESPism, the Mars effect, and other nonsense.

I am referring to McKusick's criticism of *Saga America* (*SI,* Spring 1981 and Winter 1981–82) and previous attacks of a similar nature by J. R. Cole in *SI* (Fall 1980). Having read most of Barry Fell, I am not aware of his having ever advanced claims remotely linked to the paranormal. Fell's well-researched work concerns the discovery of many close associations between pre-Columbian American inscriptions and other material remains with transatlantic sources from the Old World. While many of the hundreds of examples submitted by Fell are quite sound, it is admitted that some of his claims are debatable.

Basically, the argument in dispute, which has gone on for decades, is whether the remains of pre-Columbian civilizations, such as those of the Olmecs, Incas, and Mayas, are due to transatlantic origins or are independent indigenous creations. The outcome, with McKusick and Cole favoring the latter view, is far from settled. For example, it is a fact that the highly developed Olmec and Inca civilizations, when studied, show that they emerged in America almost fully developed, with little evidence of previous development. McKusick's and Cole's adherence to their independent emergence lends therefore much credence to claims like von Däniken's that astronauts from outer space had been their originators. Historical Diffusionism, the contrary view, allows no such claims.

If *SI* would want to go deeper and unbiased into this anthropological dispute, it would have to expand its volume considerably.

One more point that may interest *SI* readers is that, in his support, McKusick cites the so-called distinguished Cambridge archaeologist Professor Glyn Daniel. Here is an example of the latter's views and methods: In his book *The Idea of Prehistory* (Penguin 1964, pp. 100–01), Daniel arrogantly maintains that the pyramids of Central America were only superficially identical with those of Egypt. The Egyptian pyramids, he says, were tombs, while the American pyramids were merely great temple platforms, with religious rites performed on top. In contradiction, Thor Heyerdahl (*The Ra Expedition,* 1972, p. 125), when visiting the Palenque pyramid in Mexico, noted its extraordinary likeness to the Egyptian pyramids: ". . . and now in addition there was a priest king laid out." He concluded that inside and outside the sun king of Palenque followed the ancient Egyptian formula of pyramid burial. At another occasion, Daniel faced his adversary face to face. It was at the symposium honoring Professor Elliot Smith, the father of Historical Diffusionism (the Zoological Society, London, Nov. 9–10, 1972). It was in my presence that R. A. Jairazbhoy, an Indian anthropologist, challenged Daniel on the Palenque pyramid. In addition, he mentioned the example of the pyramid of Totimehuacan in Pueblo, dating from the sixth century B.C. It contains a typically Egyptian arrangement of a gallery leading to several corbel-vaulted burial chambers. Daniel was unable to refute such evidence. Did he therefore retract his views? No! He simply kept mum.

G. Kraus
Yaba, Nigeria

Marshall McKusick replies:

The writer, G. Kraus, touches upon the amazing linguistic revelations by Barry Fell, a transatlantic origin of native American civilization, Egypt in ancient Mexico, and Historical Diffusionism. Each topic provides an example of the debate between professional archaeologists and their opponents, who in the main are ill-informed, self-taught, and enthusiastic amateur antiquarians.

In the same way that a butcher might turn weekend mechanic for simple car repairs, Barry Fell has shifted from marine biology to try his hand tinker-

ing with linguistics and archaeology. As such matters are judged in American universities, Professor Fell has absolutely no competence or scholarly credentials in comparative linguistics or archaeology. This explains why major flaws and errors of fact permeate Fell's conclusions about prehistory as he has published them in three books—America B.C. *(1976),* Saga America *(1980), and most recently* Bronze Age America *(1982). The objections to Fell's research are based upon my own knowledge and that gained from the reports of other professional scholars, and I refer readers to the citations of negative commentary on Fell's theories, which are discussed at length in my article "Deciphering Ancient America."* (SI, *Spring 1981, pp. 44–50). I also refer readers to the complaints aired by Fell and my reply in "American Inscriptions,"* (SI, *Winter, 1981–82, pp. 74–76). Concerning earlier revelations, I have already explained why Fell's Beltane Stone from New Hampshire cannot have been written by an ancient Gaul because the markings were not man-made but originated geologically as granite blips in gneiss. Similarly, recent Yankee plow-marked field stones in Vermont cannot be 2,000-year-old Irish ogham script, and the nineteenth-century Davenport and Grave Creek forgeries cannot be inscriptions left by ancient Egyptians and others. In his most recent book,* Bronze Age America, *Fell provides further delusions, in this case the presence of Vikings in America in 1500* B.C., *some 2,300 years before Scandinavian language developed into Old Norse. In a review of* Saga America *appearing in the Winter 1981 issue of* Archaeology *I labeled Professor Fell "the Typhoid Mary of popular prehistory," and nothing he has since published has altered my view of the misconceptions and errors he is spreading among the reading public.*

Other topics touched upon by Mr. Kraus have nothing to do with Fell's theories. In particular, it is factually inaccurate for Kraus and others to state that Olmec and Inca "civilizations . . . emerged in America almost fully developed with little evidence of previous development." Those wishing to pursue this matter are advised to consult An Introduction to American Archaeology *by Gordon Willey (2 vols., Prentice-Hall, 1966–1971), where they will find the allegedly missing stages described and illustrated, and the origin of indigenous American civilization fully accounted for and explained by research of long standing. The so-called lack of evidence is a very old chestnut indeed, first proposed by an English anatomist, Sir Grafton Elliott Smith in the 1910s. His purpose was to persuade his lay audience that Egyptianized Polynesians somehow brought civilization to the savage American Indians, a theory outmoded and unsubstantiated to say the least. Kraus brings further confusions to our attention by his examples. His "Inca" were in fact the terminal Peruvian civilization of the Post Classic, overwhelmed by Spanish invaders, and the last of a long series of prehistoric aboriginal city-states and empires. There is no gap before the Inca. The "Olmec," to mention the other example raised by Kraus, were Pre-Classic or Formative, flourished some two thousand years or more before the Inca, and were an early, successful forerunner of civilization based upon native American forms of ceremonial centers, a priestly hierarchy, and peasant villages.*

What some skeptics term pyramidiocy is another excuse to promote an outside inventor of aboriginal civilization, but the Egyptians are a singularly poor choice as culture heroes to ancient America, because historians question whether ships of Egyptian registry traveled even as far as Crete. As for the pyramids themselves, Egyptian structures were pointed on top, did not support temples, were rare, and occurred in sanctified areas away from cities for the primary purpose of the interment of a reigning Old Kingdom pharaoh. In contrast, flat-topped American prototypes supported temples, commonly occurred, appear in the center of aboriginal urbanized

areas, and rarely included central tombs. Moreover, there is a major chronological gap of between 1,000 and 2,000 years between the abandonment of Old Kingdom pyramid construction in Egypt and the time when American examples began to be a prominent architectural feature in a few areas of Meso-America. This time-gap is difficult to explain if Egyptians brought pyramid-building to America.

Diffusion studies in American anthropology had a long and honorable history as a scholarly approach tracing individual traits of culture seemingly shared in common between the Old World and the New. Nevertheless, most anthropologists have long since shifted their interest from such matters because diffusion research proved to be disappointingly imprecise and inconclusive; much of it was rejected out-of-hand because of poor methodology, inadequate comparison controls, and errors of fact. "Historical Diffusionism" is a revival that suffers from the flaws of its predecessor, anthropological diffusion studies. It is a fair comment that the new "Historical Diffusionism" is by and large an amateur antiquarian fancy rooted in nonanthropological studies and accordingly adds no weight to discussions of putative crossings to America before Columbus.

Two decades ago professional research finally confirmed literary evidence and stray finds that a Greenland-based temporary settlement about A.D. *1000 had been built on the shore of northern Newfoundland by Norsemen. It was one of various abortive attempts by Greenlanders and Icelanders to establish a foothold on the coast of northern North America, and the Norsemen withdrew according to saga "because of the native inhabitants." The new "Historical Diffusionists" have missed the point of this research, namely, that Greenland Norse farmsteads were inhabited for nearly five centuries 350 miles across the Davis Strait from North America and yet no Great Tradition for Scandinavian civilization was left among the Eskimo and Indian aboriginal populations in either Greenland or on the continent. The aborigines did not become dairymen, sheep herders, wool spinners, iron users, or for that matter Christians. The "Historical Diffusionists" would now have us believe that Chinese, Egyptians, Phoenicians, African blacks, Romans, Greeks, Hebrews, Syrians, Libyans, and numerous other nations of antiquity all crossed to Middle America to somehow leave a Mediterranean-based civilization among the native Americans—an article of faith without support from Old World literary traditions and lacking archaeological evidence and artifacts in the New World. The professional evaluation of a complex subject remains negative; there is no acceptable archaeological evidence for any major modifications of aboriginal Meso-American or Peruvian civilization by any ancient Old World travelers.*

UFOs and the FBI files

Philip J. Klass may have lost himself in the intellectual labyrinth that is a danger to anyone whose avocation or preoccupation is cultist literature: the paranoia that winds itself through the tracts and offerings of the True Believers can also seep into the well of Pure Science, and among the folks who raise their eyebrows when unorthodoxy raises its head among all the properly credentialed members of the club.

Becoming the chief UFOlogy Watcher may have cost Mr. Klass some caution in his zeal to discredit some of the granddaddies of the movement, such as Donald E. Keyhoe. One need not be an impassioned advocate or dissenter of the saucer school to raise some serious questions about Mr. Klass's contribution to your "News and Comment" section for Winter 1982–83.

Shades of Robert Oppenheimer! Are physical and clinical scientists so immune to the currents of the past three decades of our political and social history that they are ready to revert to the old dossiers and files of our professional gumshoes, circa 1950?

For the benefit of Mr. Klass, there is an ample body of literature, a significant amount of it by onetime "insiders" in the FBI of the J. Edgar Hoover days, to question any "interoffice memoranda" of the Bureau of that period.

A case could be made to discredit just about any significant figure of American politics, arts, science, letters, or culture if one were to give credence to the "documentation" of the FBI archives of the Hoover years, immune from the courts and the right to obtain these clandestine assessments before the post-Hoover Freedom of Information Act.

Come on, Mr. Klass. Donald Keyhoe's flying saucers will appear or disappear in the pages of the history of science or the commentaries on pseudoscience without injecting the discredited tales of professional hunters of political witches of recent memory. One might suggest that he look again at the objectives of the CSICOP, and its injunction to "examine . . . objectively and carefully."

Russell W. Gibbons
Pittsburgh, Pa.

Philip J. Klass replies:

Gibbons is correct that Donald Keyhoe's writings on UFOs will stand or fall on their own merit. If, as I have found, they have been grossly inaccurate and misleading, the question arises as to whether that was Keyhoe's characteristic modus operandi, or simply when he was writing about UFOs. The FBI memorandum provides useful insights into that issue, despite Gibbons's effort to discredit it solely because its writer was a member of the FBI under J. Edgar Hoover. Surely Gibbons does not challenge the FBI memorandum's statement that Keyhoe had coauthored an article in the January 1941 issue of Cosmopolitan *magazine charging that the FBI had in its possession documents revealing Hitler's plans to seize the U.S. Merchant Marine and was taking no action to thwart such plans. Perhaps he disbelieves the FBI denial that it had such documents in its possession?*

The dinosaur expeditions

In autumn 1981, an expedition led by Herman Regusters, an engineer at the Jet Propulsion Laboratory in Pasadena, traveled to Lake Telle in the Republic of the Congo in search of the last living dinosaurs, and the SKEPTICAL INQUIRER in Summer 1982 reported whimsically that the group claimed to have seen one. Our own skepticism might have been tempered if you had also reported that the group included the Director of Animal Management for the Republic of the Congo, the Game Warden for the Likouala Region (an area as large as Guatemala), and a former superintendent for the Department of Game and Wildlife in Ghana. All three zoologists saw and heard the creature for at least ten minutes, agreeing that it was no species known to Africa.

Still, Richard Greenwell, of the rival expedition led by Roy Mackal of the University of Chicago, is incredulous because, he announces, the lake is only nine feet deep. One wonders by what extrasensory perceptions a man who was, at his closest, fifty miles from the lake determined that it was nine feet deep. One wonders why he himself spent two months and $40,000 attempting to reach a lake that was nine feet deep. One wonders, indeed, if any lake anywhere is one and a half miles in diameter but is nine feet deep. The fact is, the 200-foot sounding-line lowered by Regusters failed to reach the lake's bottom. "We were unable to establish an abyssal depth," he reported in a monograph published by the California Institute of Technology ("Mokele-Mbembe," *Munger Africana Library Notes,* July 1982).

It was, furthermore, the Regusters expedition and not, to my knowledge,

the Mackal one that brought back collections of soil, water, insects, snakes, and baby gorillas to the Brazzaville Zoo, the Université Marien-Ngouabi, the French government's Office de la Recherche Scientifique et Technique Outre-Mer (ORSTOM), and the Los Angeles County Museum of Natural History. Finally, it's absurdly untrue that Regusters made unsuccessful efforts to join the Mackal expedition, which in fact was originally known as the Mackal–Regusters Expedition. On February 9, 1981, Mackal wrote to Regusters: "I insist that the expedition title include your name."

John Sack
Los Angeles, Calif.

Richard Greenwell responds:

I would like to respond to five points:

1. Independent and separate sources in the Congo have informed us that the African members of the Regusters expedition state that they did not see any unknown animals. We have not yet had any direct communications with these alleged witnesses, but we plan to pursue this matter further.

2. Although the Mackal expedition visited Boha, Regusters's base village, we operated further down the Likouala River and up the unexplored Bai River. Our closest approach to Lake Telle on the Bai was 20 miles.

3. We collected soils and biological specimens—invertebrates, amphibians, reptiles, birds, and mammals, including primates (although we did not kill or permit the killing of gorillas, as happened on the Regusters Expedition). An archaeological site was also excavated (the first in the northern Congo). Collections are deposited with ORSTOM, the Marien Ngouabi University, the U.S. National Museum of Natural History (Smithsonian Institution), and the University of Arizona.

4. It is true that Mr. Regusters was part of the Mackal expedition during much of the planning stage (he was originally one of over 500 people who wrote asking to join!). Following an unauthorized June 1981 press conference in Pasadena, in which Mr. Regusters announced that we would be penetrating an area inhabited by headhunters and cannibals (totally fabricated information that was unfortunately published by the Washington Post *on June 28, 1981), and considering other behavioral factors, Dr. Mackal terminated Mr. Regusters as an expedition member on July 7, 1981. Mr. Regusters then formed his own expedition.*

5. Concerning the depth of Lake Telle: unfortunately for Mr. Regusters and Mr. Sack they were apparently unaware that Jean Grandin, a French scientist with ORSTOM, had visited the lake in October 1976 and had taken 40 soundings across its entire surface (6.5 km × 4.5 km, or an average of one measurement per 4.75 km²). The average *depth of the lake—a lake in which Mr. Regusters says he saw a large, long-necked animal surface and submerge on several occasions—is 217.6 cm, or just over seven feet. The* maximum *depth is 280 cm, or nine feet. The lake is a little deeper in the rainy season, of course, and Regusters team did, in fact, arrive there in the rainy season. But so did Dr. Grandin, who did his 40 soundings on almost the exact same date five years earlier.*

As for Mr. Sack's assertion that Mr. Regusters lowered a 200-foot sounding-line that did not reach bottom, this whole question requires clarification. In his Preliminary Report (December 16, 1981), Mr. Regusters stated (p. 2): "Because of the complexity and level of effort required for such a feat, no attempt was made to survey the contour and depth features of the lake." This is a strange statement, as soundings are just about the easiest things in the world to do. He then goes on to state that, after a "gradual sloping" for several hundred yards, there appears "an abrupt increase in water depth." Apart from the fact that this is a scientifically meaningless statement, how could he know this without having

surveyed the depth features of the lake?

In his Final Report (January 20, 1982), he stated (p. 7): "at the tree line, water depth was about one meter, which increase [sic] *gradually towards the center for several hundred meters. Beyond that a rapid increase occurred* to a depth in excess of several hundreds of meters" *(emphasis added). Again, one may well wonder how he could have determined that the lake has a depth "in excess of several hundreds of meters" without taking soundings. If soundings* were *taken, why were these crucial measurements not included in the Preliminary Report, the Final Report, or the article in the CalTech* Munger Africana Library Notes?

Despite the fact that the Regusters reports contain an incredible number of biological and ecological errors and misconceptions for a team supposedly conducting scientific fieldwork (continual and irritating references to the "marine" organisms of Lake Telle, for example), one must have great admiration for Mr. Regusters's perseverance and personal courage in penetrating the Likouala swamps. At the same time, however, in light of the ORSTOM data indicating that Lake Telle is very shallow, his anecdotal reports of large animals surfacing and submerging in the lake must be examined very critically indeed.

If Mr. Regusters and Mr. Sack wish scientists to seriously entertain the "dinosaur sightings," then they must, at the very least, describe in some detail the scientific methods used in determining the different depths of the lake, and exactly what these depths were found to be. These data must then be reconciled with the ORSTOM data. Only then can his reported sightings of the supposed dinosaurs in the lake be evaluated on their own merits.

Flight of the bumblebee

Recently, here in Canada, one of the major chartered banks ran a series of ads designed to convince people that the recession isn't as bad as it seems. One of those ads was entitled "The Bumblebee Can't Fly." The ad told the story of how the bumblebee defies science when aeronautical equations show that it hypothetically cannot fly. The ad then went on to point out that, just as we shouldn't believe everything scientists say, we should also not believe that the recession is as bad as people say.

I have heard this bumblebee story before, but usually from anti-science groups, particularly creationists who use it to show that science is wrong-headed. I also know that there is a sequel to this story, namely that whoever did the bumblebee calculations used the wrong equations. The bumblebee was treated as a fixed-wing aeroplane, which it is not. I wrote the chartered bank about this, and in addition my local newspaper was kind enough to print my letter explaining the matter.

What I don't know is exactly who started the story, where it took place, and who refuted it. My memory tells me that the calculations were done by University of Chicago engineers during World War II, but I could be wrong. I would greatly appreciate knowing the details, if any readers have them and would be willing to write.

D. C. Speirs
Box 6830, Stn. "D"
Calgary, Alta.
T2P 2E7, Canada

A dart to *SI* . . .

As a new subscriber, I have waded through three issues and am finally driven to make some comment. I was encouraged to see some editorial effort devoted to serious, scientific, intelligent analysis of the growing body of extraordinary claims. The media has been notably one-sided in its coverage (with a few very noteworthy exceptions). The SKEPTICAL INQUIRER came across as the magazine asking what I call "obvious questions," but, instead,

I found a spotty, disorganized, "journal"-formulated collection of letters from authors patting themselves on the back for another incident of pseudoscience debunked, generally written in a tone of such intellectual snobbery my spine crawled. (Believe me, I'm no offended "true believer"; I'm an offended skeptic.) I am looking for informative, detailed investigation, not "nose-thumbing."

Don't grouse unless you have something better to suggest, they say; so here is my suggestion. Use the quarterly time-frame to advantage—to produce "theme" issues. Leave the newsfronts, book reviews, letters sections, etc., to the topical notes. Devote the core of each issue to a hard look at one subject, be it creationism, Kirlian photography, Loch Ness monsters, UFO abductions, Bimini walls, pyramids, or Mojave ground-paintings. Put together a coherent collection of facts, figures, and photos sufficient to shed some honest light on the subject.

Gregory H. Shaw
Cupertino, Calif.

. . . and a laurel

I'm writing to tell you how important your magazine has become to me. I subscribed just under a year ago in hopes of finding, at last, a forum airing *scientific* investigations into the multitude of paranormal claims surrounding us in this (supposedly) enlightened age. So ably has your magazine achieved this end that I find myself awaiting eagerly the next issue as I would a breath of fresh air, especially after reading yet another "Stunned scientists discover" or "Mystified mystics report" headline in the press (yes, even—as I'm sure you're only too well aware—the established press).

Dave Gerr
New York, N.Y.

Legal tactics against the occult?

I am interested in the question of what legal action could be taken against phony psychics and occult organizations in the United States. I am particularly concerned about such groups as Astara, the Rosicrucians, and Eckankar. Can such groups set themselves up and operate with impunity? What can be done legally? Are any government agencies willing to take action? How helpful are some of the big police departments or state attorney-general offices or other agencies, and have any of them printed up information to warn people about fraud?

John Speights
Raleigh, N.C.

Do any legal-minded readers have answers to such questions? We are interested too.—ED.

Astral sex

Observing with pleasure the note in the Fall 1982 "Psychic Vibrations" about astral sex and psychic long-distance eroticism, I can only wait (probably a very long wait) with great anticipation the coming of a new technique in sex therapy: Asterbation.

Paul Hemenway
Austin, Tex.

Errata

In the article on the Loch Ness "monster" in the Winter 1982–83 issue, the reference to "Foyer Falls" should have read "Foyers Pier."

On page 36 of the Spring 1983 issue, the title of Joe Nickell's new book was incorrect; it is *Inquest on the Shroud of Turin.*

The Committee for the Scientific Investigation of Claims of the Paranormal

Paul Kurtz, Chairman

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Local Organizations

(groups with aims similar to CSICOP's)

California: Bay Area Skeptics, Robert A. Steiner, Chmn., Box 659, El Cerrito, CA 94530.

Pennsylvania: Paranormal Investigating Committee of Pittsburgh (PICP), Richard Busch, Chmn., 5841 Morrowfield Ave., #302, Pittsburgh 94530.

Texas: Austin Society To Oppose Pseudoscience (A-STOP), Charlotte M. Cranberg, Pres., P.O. Box 3446, Austin 78764.

The Committee for the Scientific Investigation of Claims of the Paranormal

The Committee for the Scientific Investigation of Claims of the Paranormal attempts to encourage the critical investigation of paranormal and fringe-science claims from a responsible, scientific point of view and to disseminate factual information about the results of such inquiries to the scientific community and the public. To carry out these objectives the Committee:

- Maintains a network of people interested in critically examining claims of the paranormal.
- Prepares bibliographies of published materials that carefully examine such claims.
- Encourages and commissions research by objective and impartial inquirers in areas where it is needed.
- Convenes conferences and meetings.
- Publishes articles, monographs, and books that examine claims of the paranormal.
- Does not reject claims on a priori grounds, antecedent to inquiry, but rather examines them objectively and carefully.

The Committee is a nonprofit scientific and educational organization. The SKEPTICAL INQUIRER is its official journal.